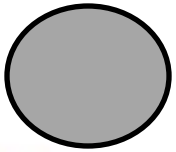
AQA GCSE Biology Paper 2 Revision

Ecology 1

Revision Session



Content you will **NOT** be assessed on

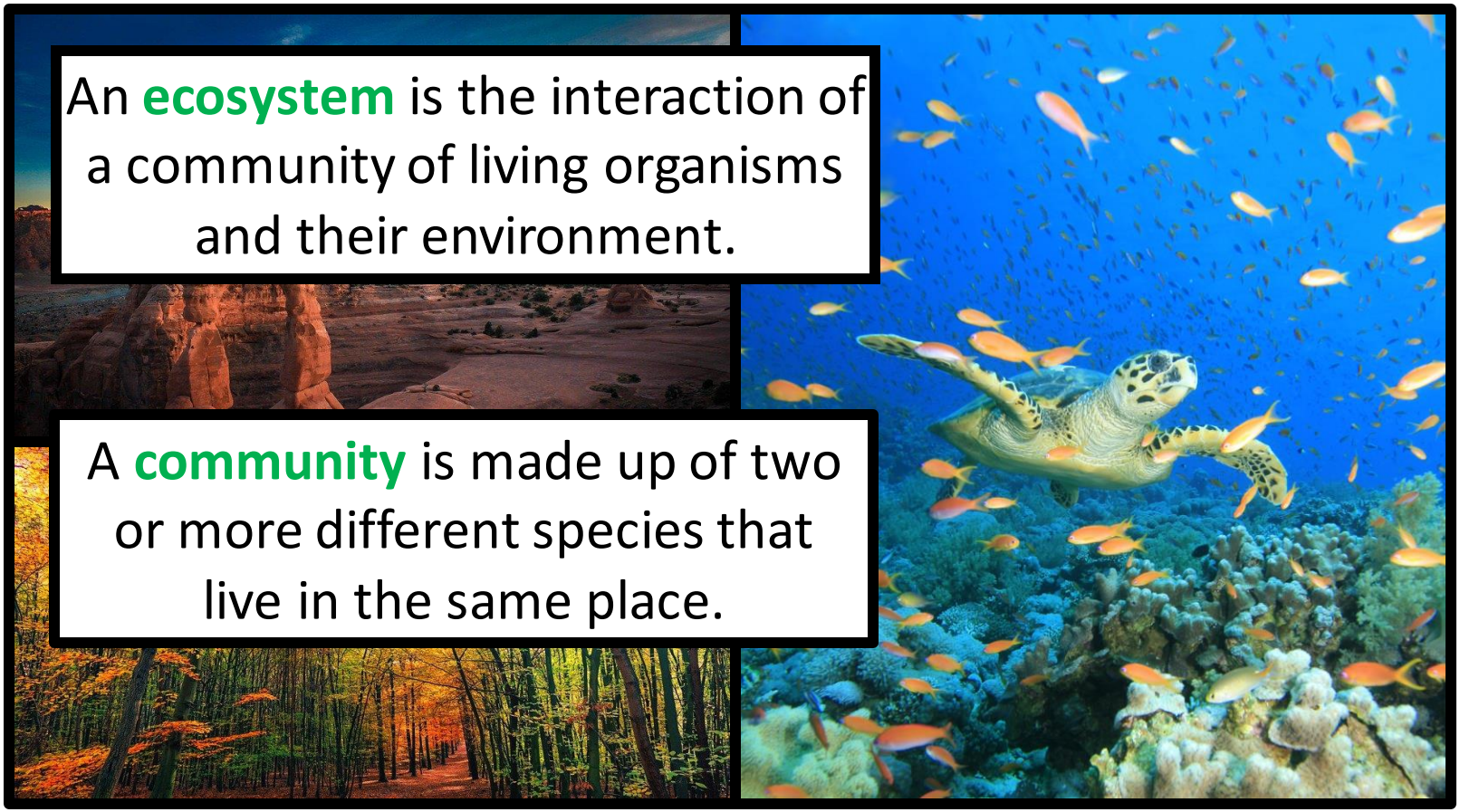
7.1.1 Communities

Think
Pair
Share

What is an ecosystem?

An **ecosystem** is the interaction of a community of living organisms and their environment.

A **community** is made up of two or more different species that live in the same place.



CS/F CS/H SS/F SS/H

7.1.1 Communities

Think
Pair
Share

How is an ecosystem organised?

Producer

Plants and algae which photosynthesise

grass and shrubs

Primary Consumer

Herbivores that eat producers

Secondary Consumer

Carnivores that eat primary consumers

Tertiary Consumer

Carnivores that eat secondary consumers

The organisation and feeding relationships in a community can be represented by food chains.

CS/F CS/H SS/F SS/H

7.1.1 Communities

Think
Pair
Share

What are animals in competition for?

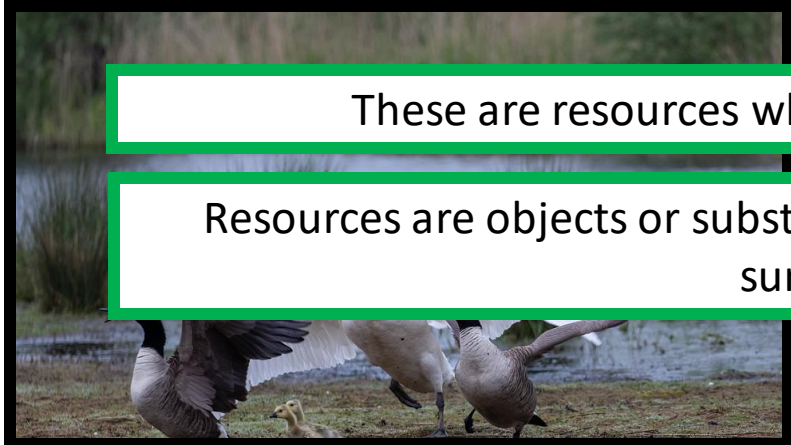
Food

Mates

Needed to reproduce

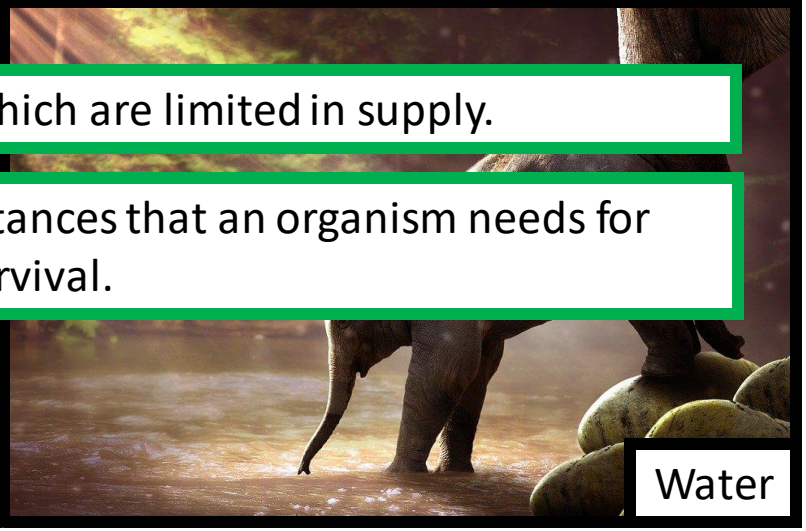
These are resources which are limited in supply.

Resources are objects or substances that an organism needs for survival.



Territory

Hunt and Shelter



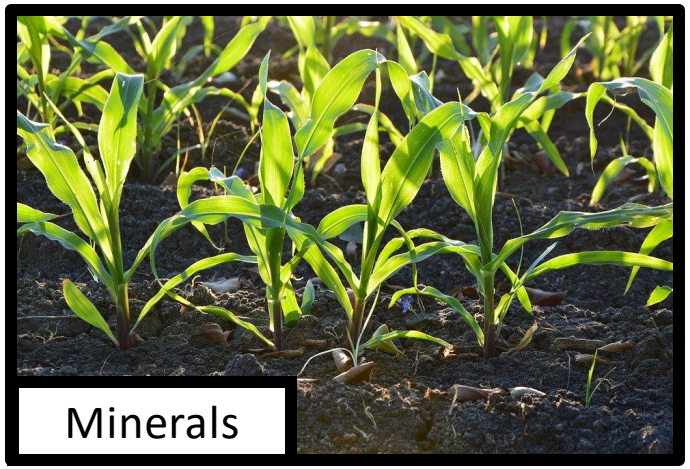
Water

CS/F CS/H SS/F SS/H

7.1.1 Communities

Think
Pair
Share

What are plants in competition for?



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7.1.1 Communities

Key Term	Definition
Ecosystem	
Interdependence	
Competition	

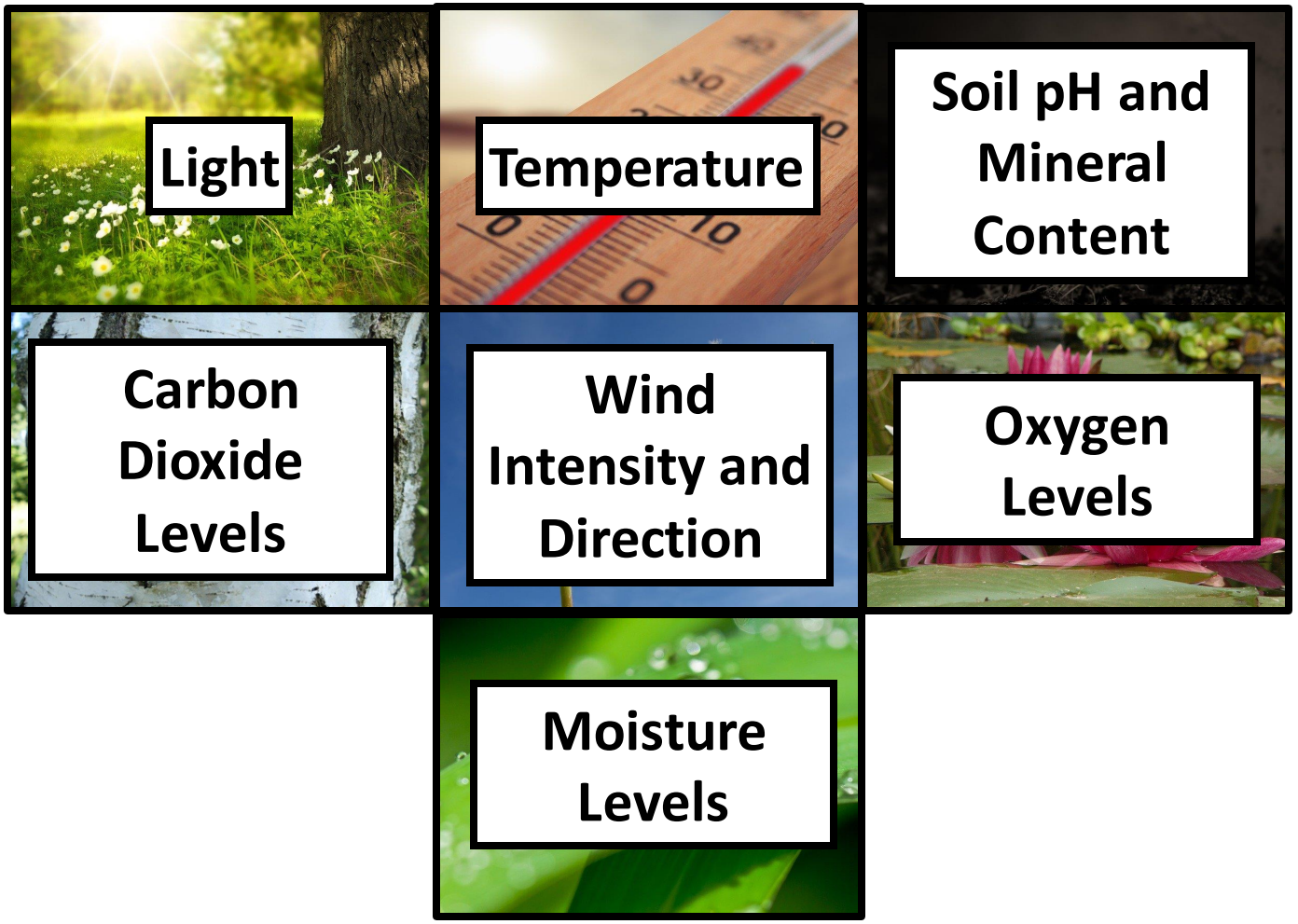
CS/F CS/H SS/F SS/H

7.1.1 Communities

Key Term	Definition
Biotic	
Abiotic	
Stable Community	

CS/F CS/H SS/F SS/H

7.1.2 Abiotic Factors



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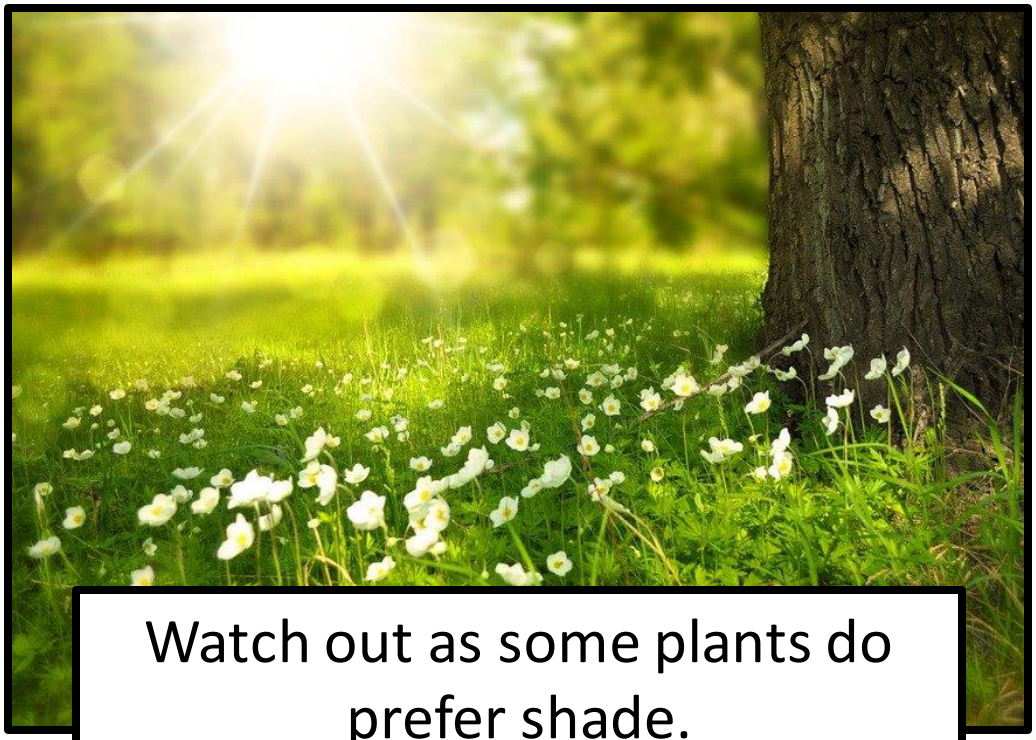
7.1.2 Abiotic Factors

Light

Typically when light intensity increases so does the rate of photosynthesis.

More photosynthesis means more growth of plants.

This means more food for consumers.



Watch out as some plants do prefer shade.

7.1.2 Abiotic Factors

Temperature

Animals and plants are adapted to survive in particular temperatures.

If the temperature changes, or an organism is moved to a habitat at a different temperature they could struggle to survive.

CS/F CS/H SS/F SS/H

7.1.2 Abiotic Factors

Soil pH and Mineral Content

Some plants and aquatic organisms are adapted to survive in different pH's.

If the pH changes the organism will struggle to survive.

CS/F CS/H SS/F SS/H

7.1.2 Abiotic Factors

Carbon Dioxide Levels

Carbon dioxide is needed for photosynthesis.

The more carbon dioxide there is the more photosynthesis and so there will be more growth of plants.

This means more food for consumers.

7.1.2 Abiotic Factors

Wind Intensity and Direction

Lots of organisms prefer more sheltered locations.

Plant seeds are more likely to settle and germinate there.

Animals that depend on these plants are more likely to live close to these plants.

7.1.2 Abiotic Factors

Moisture Levels

If water levels are low plants and animals may die.

When moisture is too high the roots become surrounded by water.

The roots cant get oxygen from the soil, stop respiring and die.

CS/F CS/H SS/F SS/H

7.1.2 Abiotic Factors

Oxygen Levels for Aquatic Animals

Water contains oxygen and is needed for organisms living in the water.

Without it animals would suffocate and die.

Polluted water has low oxygen and so many species will die.

Sludge worms do well in oxygen. They are an indicator of pollution.

CS/F CS/H SS/F SS/H

7.1.3 Biotic Factors

CS/F CS/H SS/F SS/H

7.1.3 Biotic Factors

New Predators

Leads to a huge decline in the number of prey as they have another predator hunting them.

The new predators reduce the food supply for the original predators so their numbers decrease also.

The red fox is a new predator introduced to Australia that had devastating effects.

CS/F CS/H SS/F SS/H

7.1.3 Biotic Factors

Large Availability of Food

The number of organisms that eat the food will increase.

If food becomes limited there will be the opposite effect

CS/F CS/H SS/F SS/H

7.1.3 Biotic Factors

New Pathogen

When a new pathogen is introduced organisms have no immunity.

An example from human history includes when flu was introduced to Native Americans.

COVID is another more recent example.

CS/F CS/H SS/F SS/H

7.1.3 Biotic Factors

One Species Outcompeting Another

When a new species is introduced it can result in it out competing another native species.

The native species can struggle to compete for resources and their numbers will decrease.

Grey squirrels were introduced a few hundred years ago and outcompete red squirrels for food/resources

The grey squirrels also carry a disease that kills red squirrels, but not them.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

How are plants adapted to compete for light?

Some plants have larger leaves.

Plants grow towards the light.

Some plants grow taller to be above shorter plants.

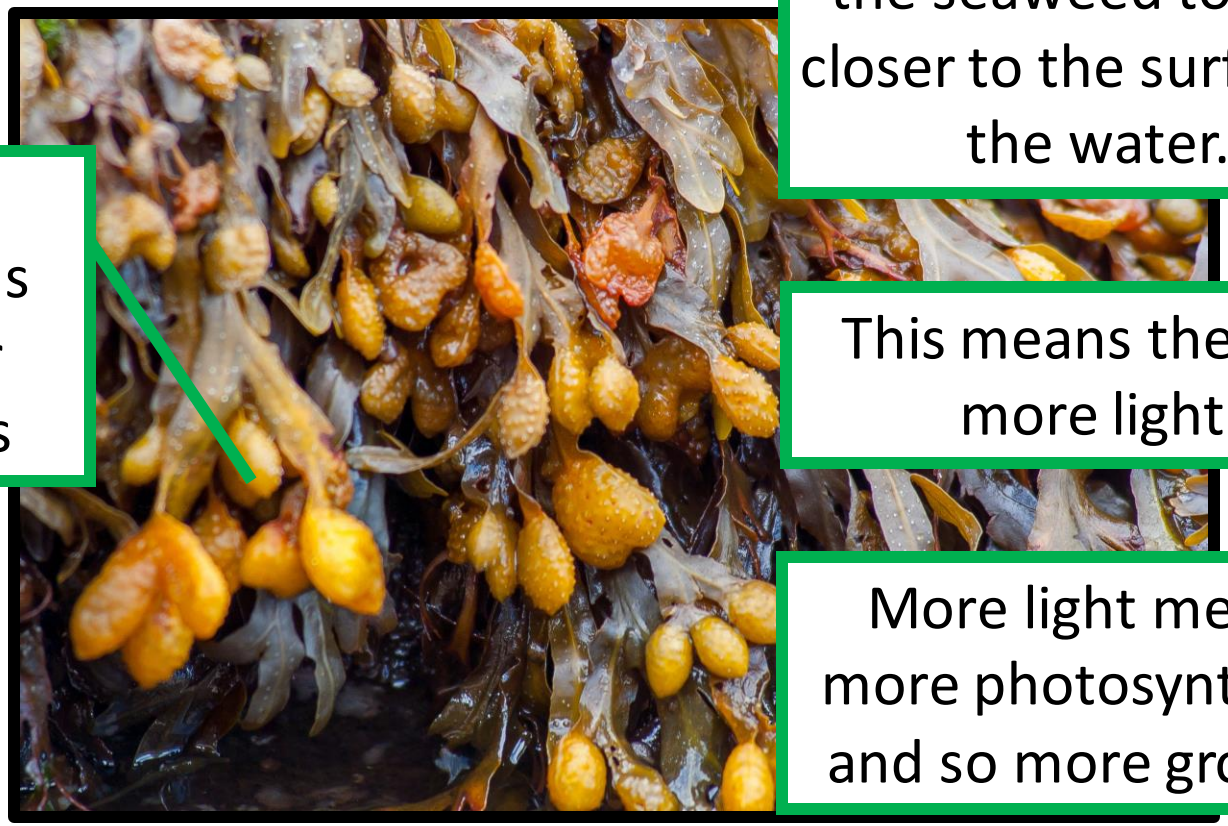
Some plants grow at different times to avoid competing with others.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

How are plants adapted to compete for light?



Some seaweeds have air bladders

The air bladders help the seaweed to float closer to the surface of the water.

This means they get more light.

More light means more photosynthesis and so more growth.

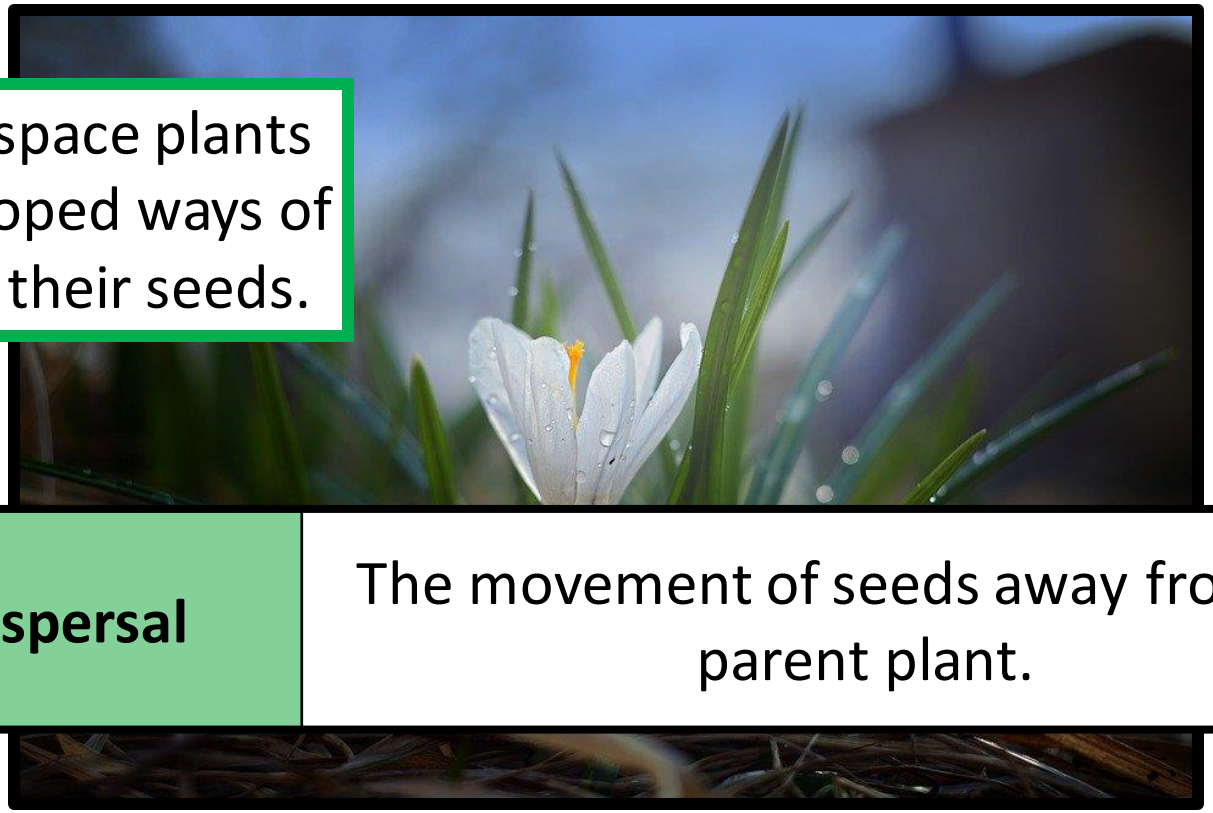
CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

How are plants adapted to ensure they have space?

To ensure space plants have developed ways of dispersing their seeds.



Seed Dispersal	The movement of seeds away from the parent plant.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

How can plants disperse their seeds to ensure space?

Some plants make fruits containing seeds, these are eaten by animals and are excreted by the animal elsewhere.

Some plants have seeds with a large surface area so that they can be blown away by the wind.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

How can plants disperse their seeds to ensure space?

Some plants have hooked or sticky seeds that attach to animals fur to be transported somewhere else.

Some plants that live by water make seeds that can float.

7.1.4 Adaptations

Think
Pair
Share

How are plants adapted to obtain minerals and water?

Plants typically have a large root system to increase the surface area that can absorb water and dissolved minerals.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

How can plants protect themselves from being eaten?

Sharp and can hurt any organisms that try and eat it.

Organisms eating the plant will find it unpleasant and stop eating it.

CS/F CS/H SS/F SS/H

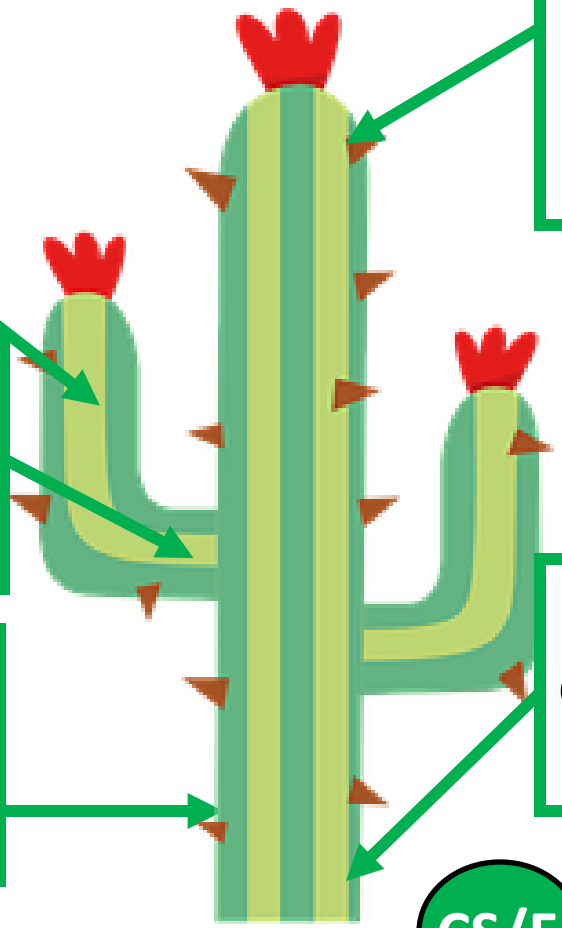
7.1.4 Adaptations

Think Pair Share

What adaptations do plants living in hot, dry climates have?

Thick waxy **cuticle** to reduce water loss by **transpiration**.

Few leaves with a small surface are to reduce water loss by **transpiration**.



Stem that can swell so that it can store lots of water.

Long deep roots to absorb water from deep underground.

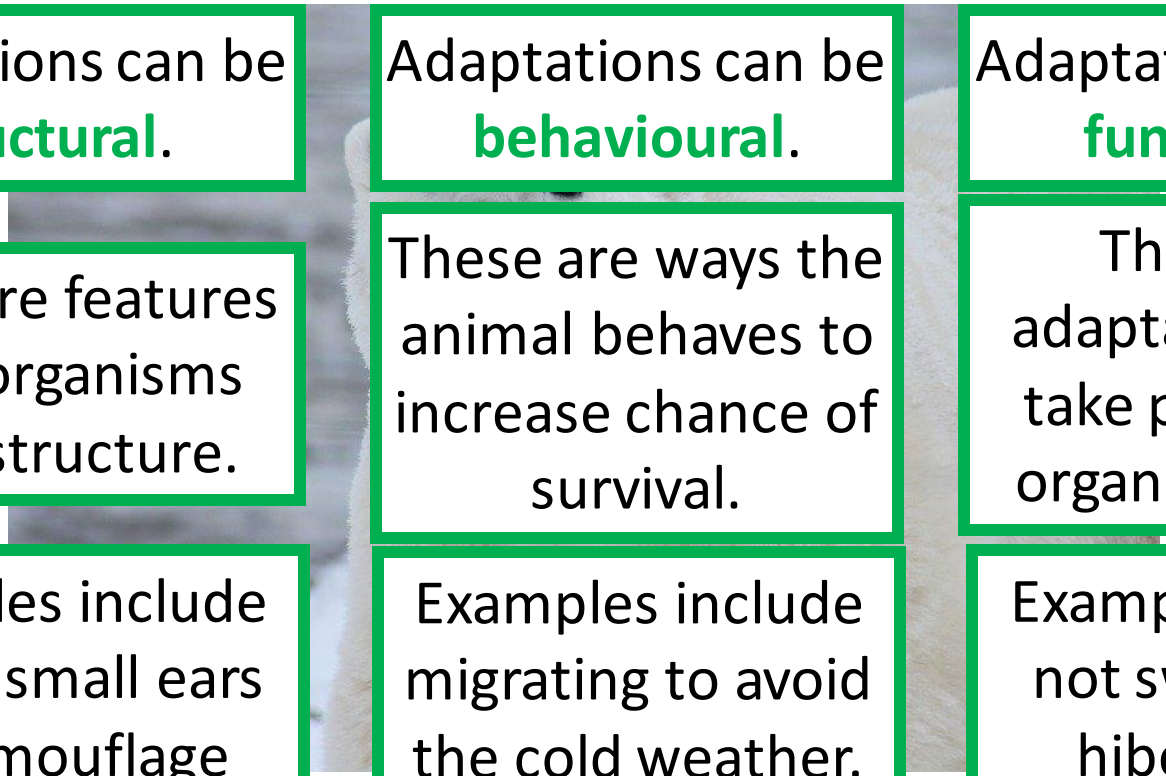
Long shallow roots close to soil surface to absorb any rainfall

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think Pair Share

What different types of adaptations do animals have?



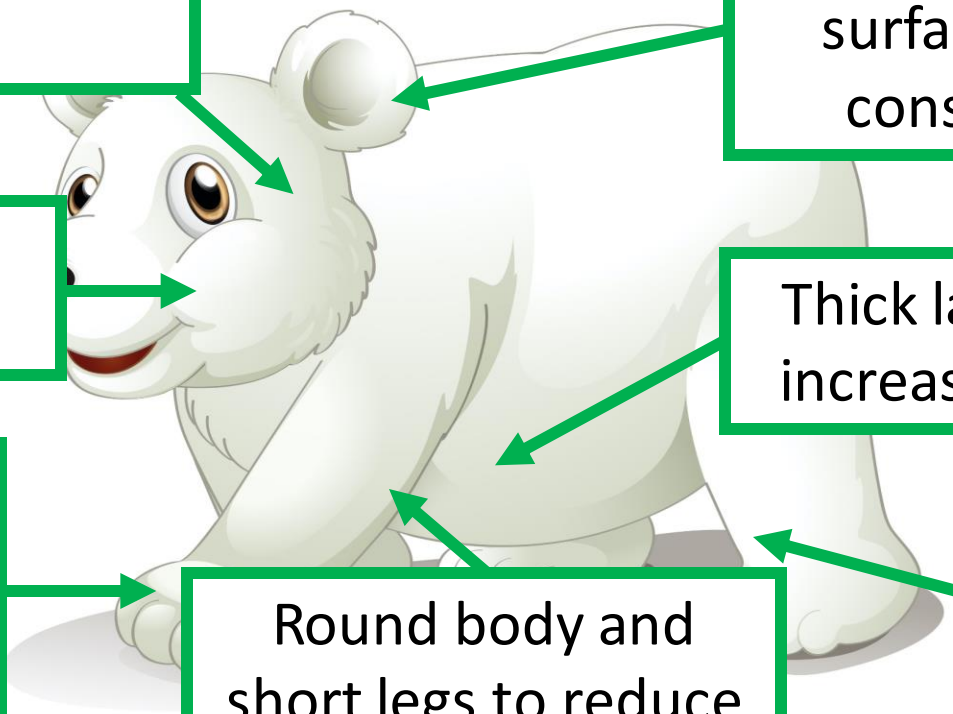
Adaptations can be **structural**.	Adaptations can be **behavioural**.	Adaptations can be **functional**.
These are features of an organisms body structure.	These are ways the animal behaves to increase chance of survival.	These are adaptations that take place in an organisms body.
Examples include having small ears or camouflage	Examples include migrating to avoid the cold weather.	Examples include not sweating or hibernating.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

What **structural adaptations** do animals living in cold climates have?



Black skin to absorb heat.

Small ears to reduce surface area and conserve heat.

White fur for camouflage

Thick layer of fat to increase insulation.

Large feet so that they spread their weight.

Round body and short legs to reduce surface area and conserve heat.

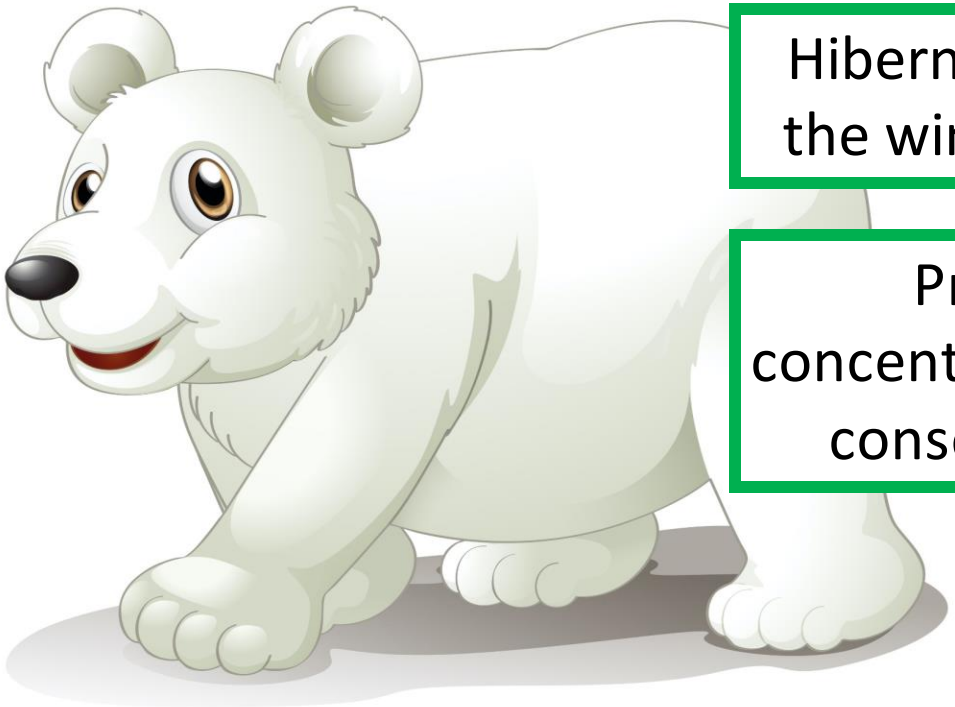
Thick fur for insulation

CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

What **functional adaptations** do animals living in cold climates have?



Hibernation during the winter months.

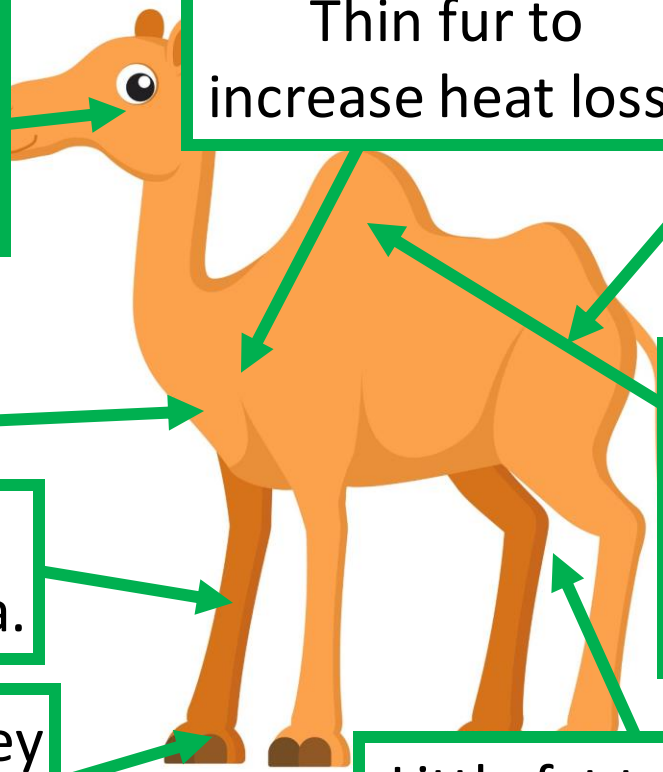
Produces concentrated urine to conserve water.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

What **structural adaptations** do animals living in hot, dry climates have?



Long eye lashes to prevent sand getting in the eyes.

Thin fur to increase heat loss.

Light fur to reduce thermal gain.

Sandy fur for camouflage.

Hump, store of fat that can be converted into water.

Long limbs to increase surface area.

Large feet so that they spread their weight.

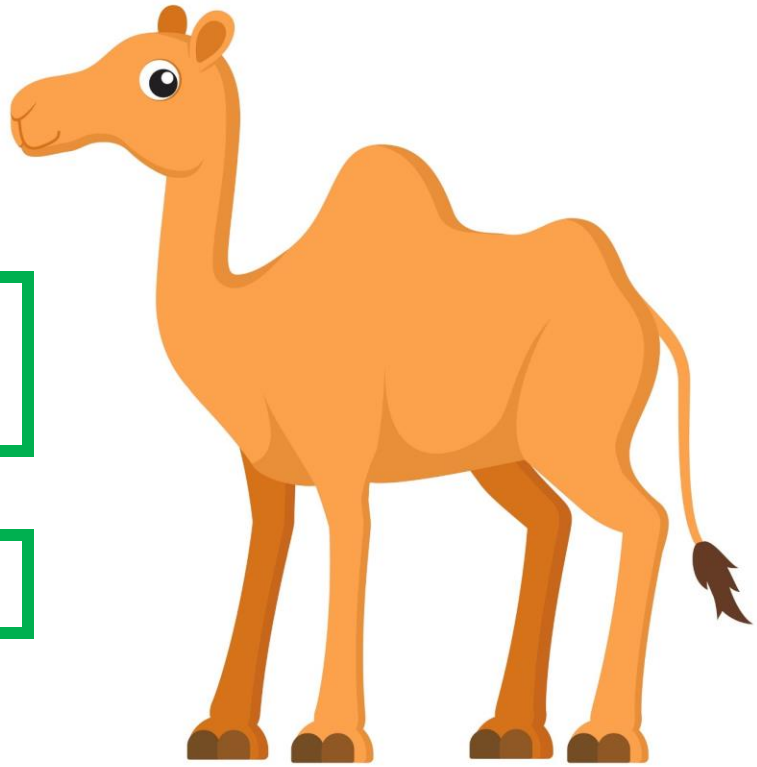
Little fat to reduce insulation.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

What **functional adaptations** do animals living in hot, dry climates have?



Produces very concentrated urine.

Does not sweat.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think Pair Share

What are the similarities and differences between adaptations for hot and cold habitats?

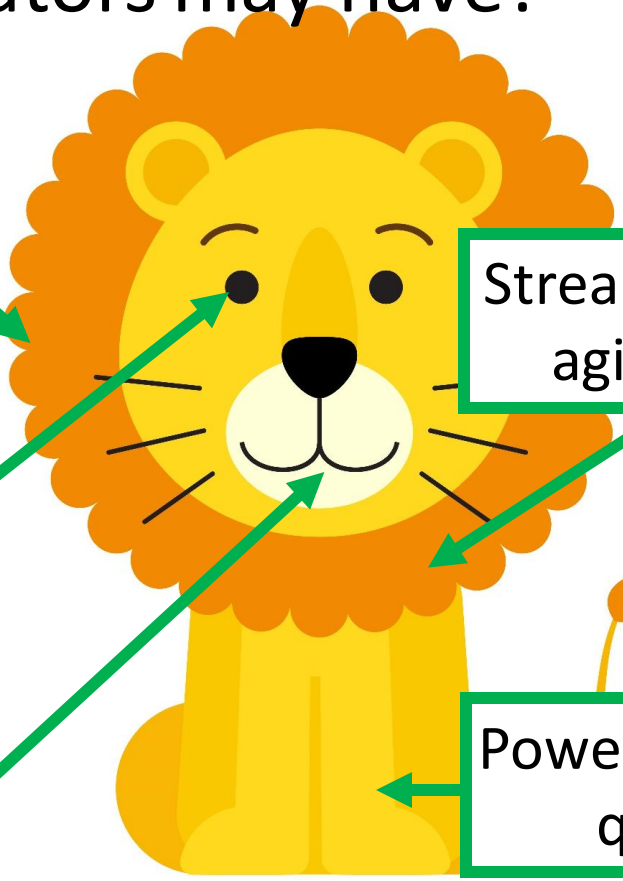
Adaptation	Arctic Habitat	Desert Habitat
Size of Feet		
Fat on Body		
Thickness of Fur		
Colour of Fur		
Surface Area		
Concentration of Urine		

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

What are typical adaptations that animals that are predators may have?



Fur for camouflage and for ambush.

Forward facing eyes/keen eyesight to focus on prey.

Sharp teeth and claws to rip/bite/tear into flesh.

Streamlined shape for agile movement.

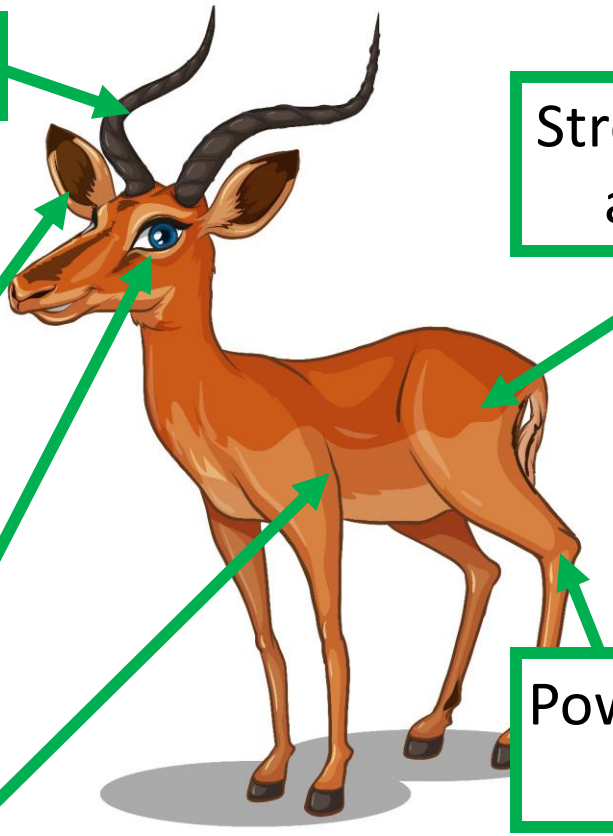
Powerful legs to run at quick speeds.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

What are typical adaptations that animals that are prey may have?



Horns for defence

Good hearing to detect predators.

Eyes on the side of the head to have good peripheral vision

Camouflaged fur

Streamlined shape for agile movement.

Powerful legs to run at quick speeds.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

Why so some animals use poisons, stings and warning colourations?

Some animals will use warning colours to try and deter predators. The colour suggests they have a defence such as poisons etc.

Some animals may have a bad taste/be poisonous to deter predators from eating them.

Some animals use venom/stings to help them catch and kill prey.

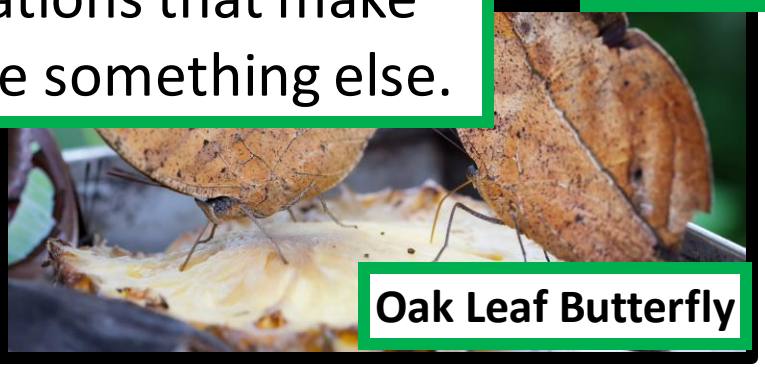
CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

Some animals use mimicry. What is mimicry?

Mimicry is when organisms have adaptations that make them look like something else.



CS/F CS/H SS/F SS/H

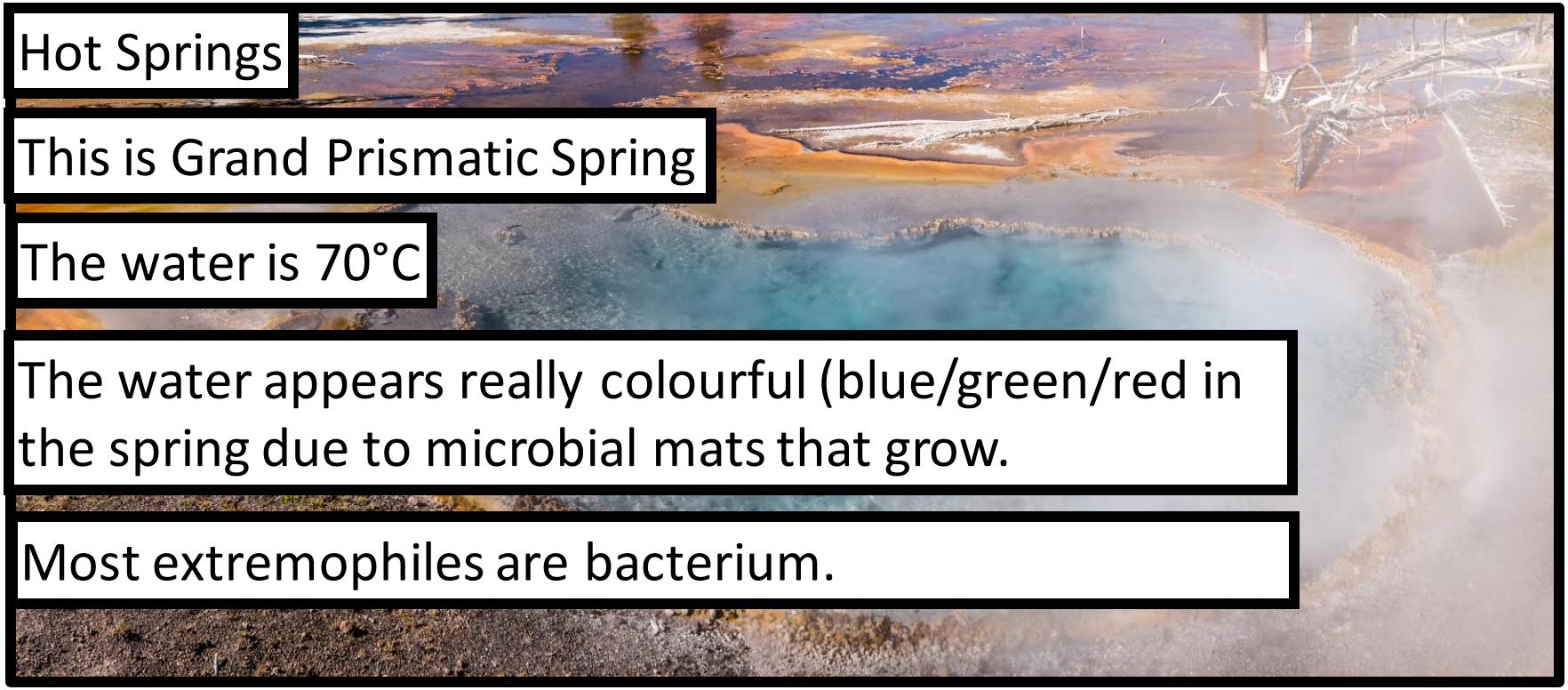
7.1.4 Adaptations

Think
Pair
Share

What are extremophiles?

Extremophiles are organisms that live in extreme environments.

Examples of extreme environments include:



Hot Springs

This is Grand Prismatic Spring

The water is 70°C

The water appears really colourful (blue/green/red in the spring due to microbial mats that grow.

Most extremophiles are bacterium.

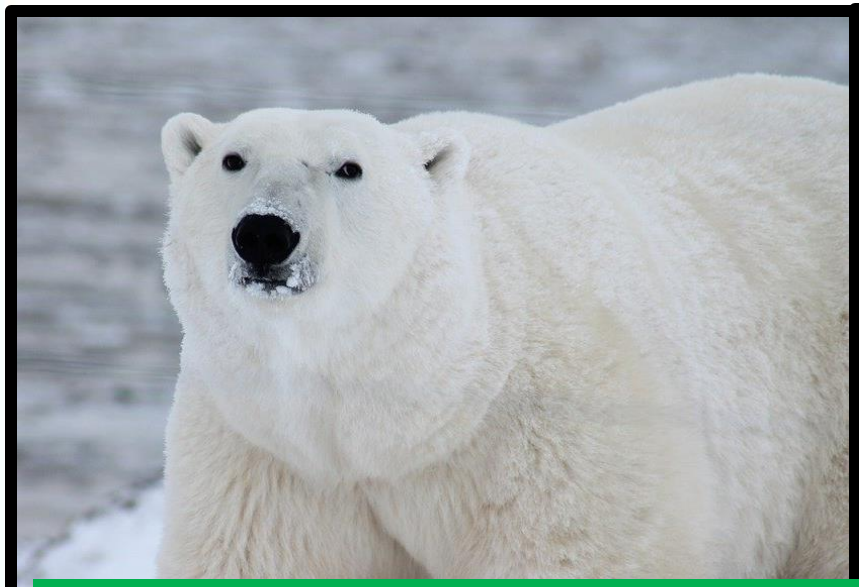
CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

Extremophiles are organisms that live in extreme environments.

Examples of extreme environments include:



Polar bears and penguins are both examples of larger extremophiles that are adapted for the cold environment.

CS/F CS/H SS/F SS/H

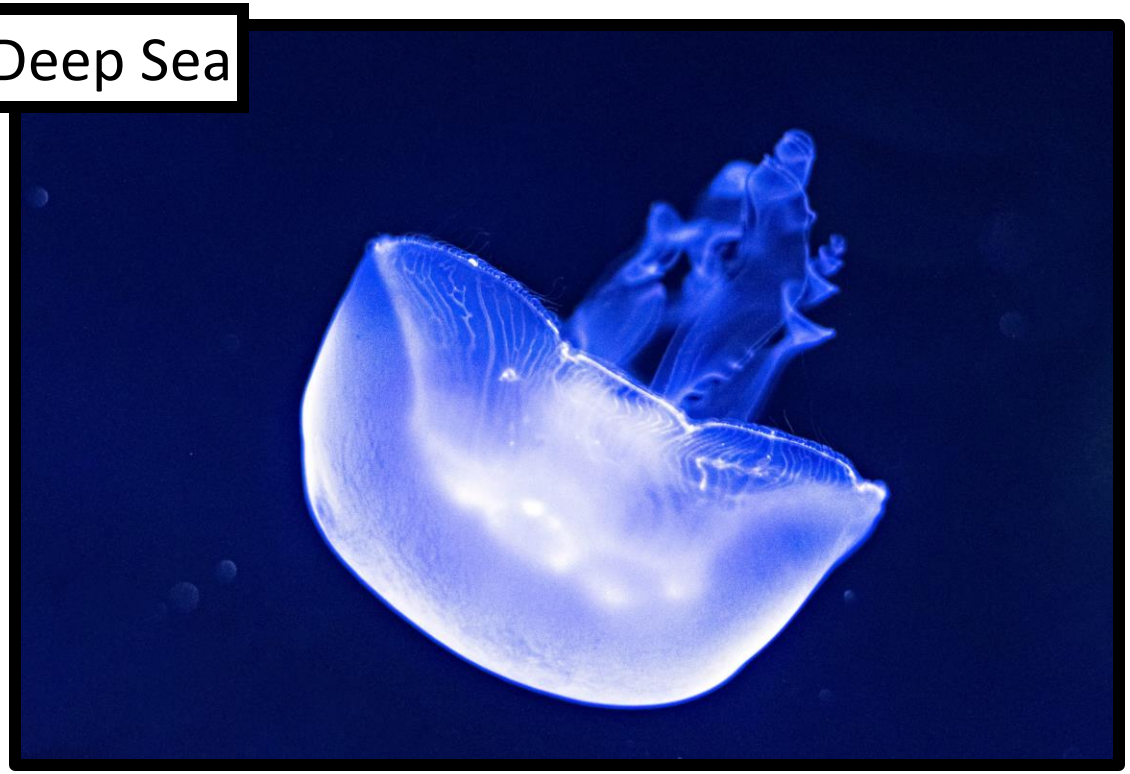
7.1.4 Adaptations

Think Pair Share

Extremophiles are organisms that live in extreme environments.

Examples of extreme environments include:

Deep Sea



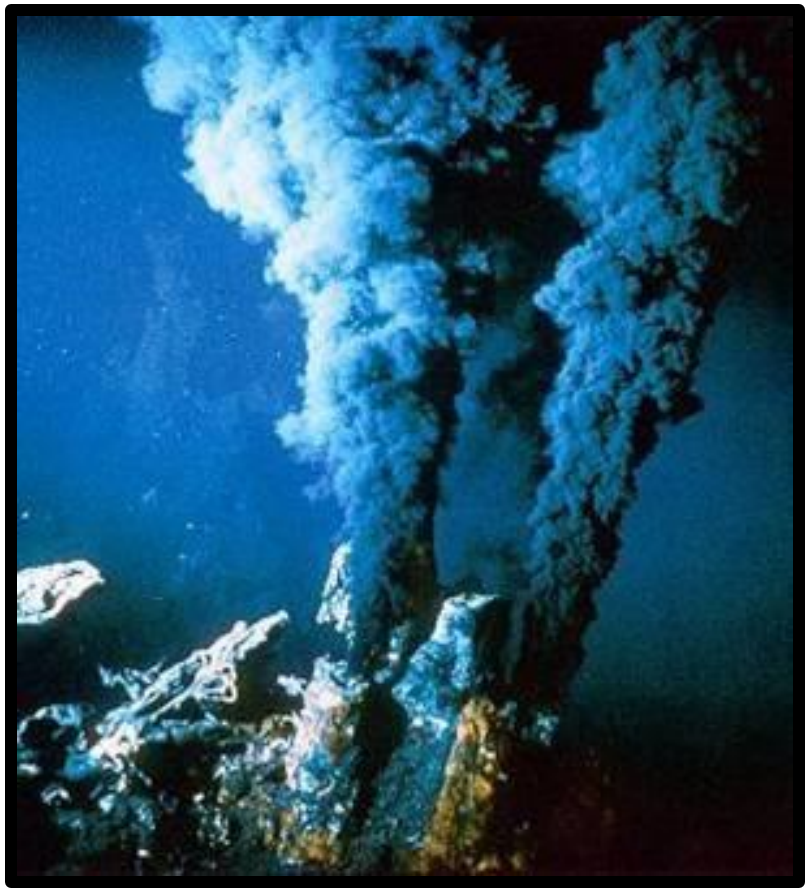
7.1.4 Adaptations

Think
Pair
Share

What are conditions in deep sea vents like?

Deep sea volcanic vents are places on the ocean floor where the volcanic gases of underground magma chambers bubble through.

This means that the temperature around the vents is very hot.



CS/F CS/H SS/F SS/H

7.1.4 Adaptations

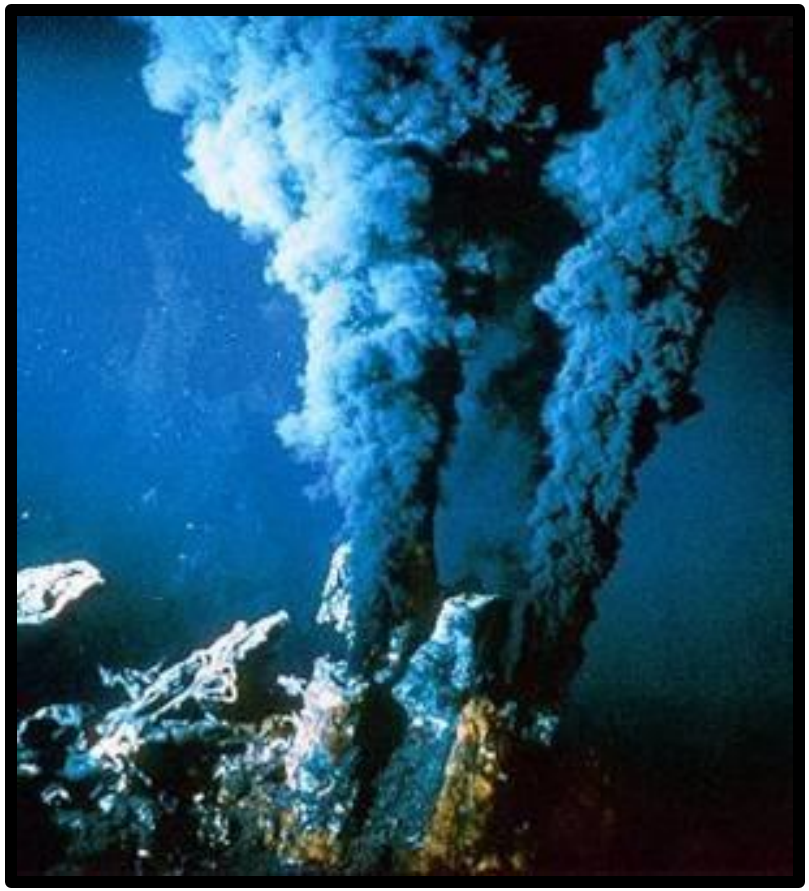
Think
Pair
Share

What are conditions in deep sea vents like?

The vents can be found 2000m or more under the seas surface.

This means it is completely dark.

It also means the pressure is very high.



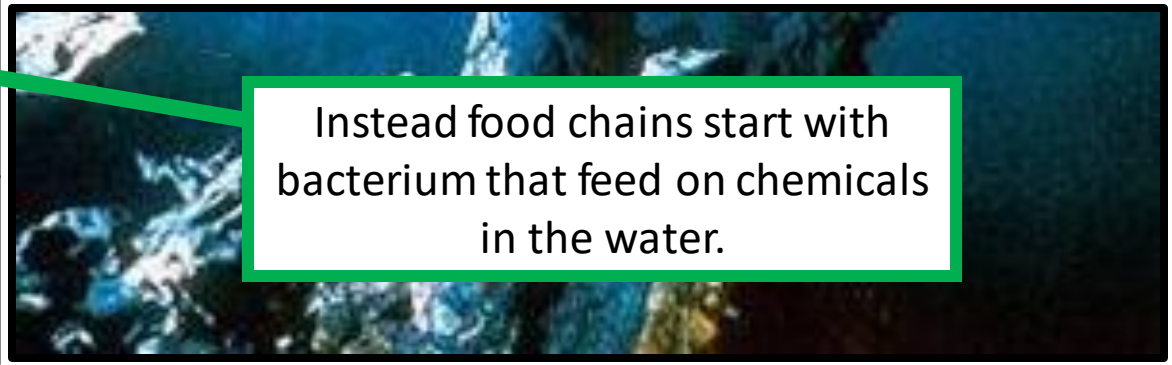
CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think Pair Share

How do these conditions pose a problem for life living around these vents?

Complete Darkness	High Temperatures	High Pressure



CS/F CS/H SS/F SS/H

7.1.4 Adaptations

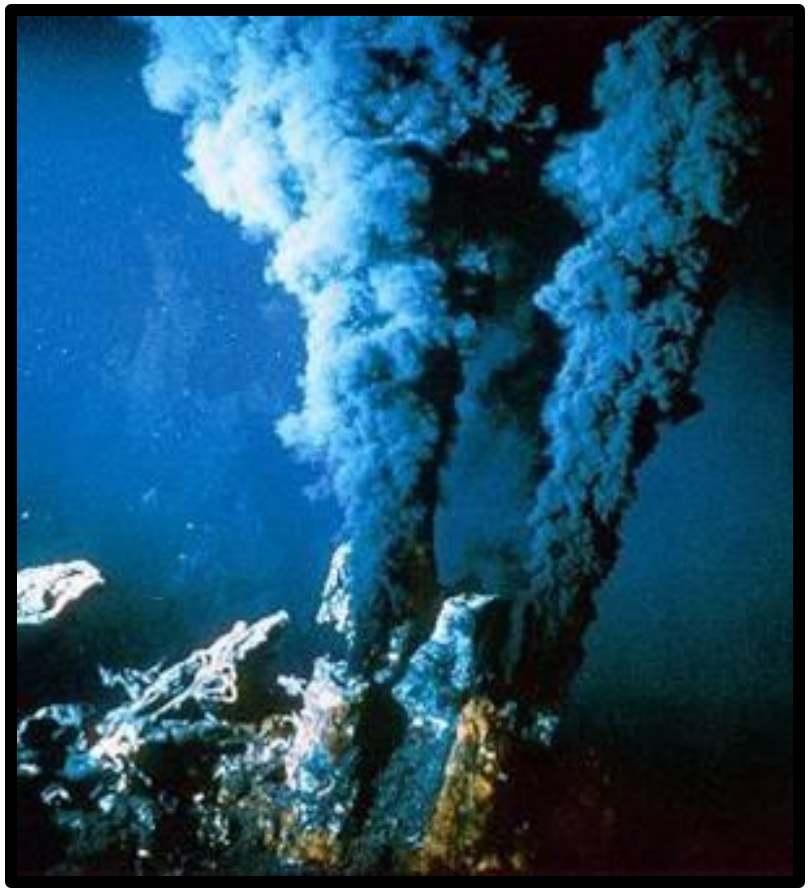
Think
Pair
Share

How may organisms be adapted to live in these conditions?

High Pressure

High/Low Temperature

Complete Darkness



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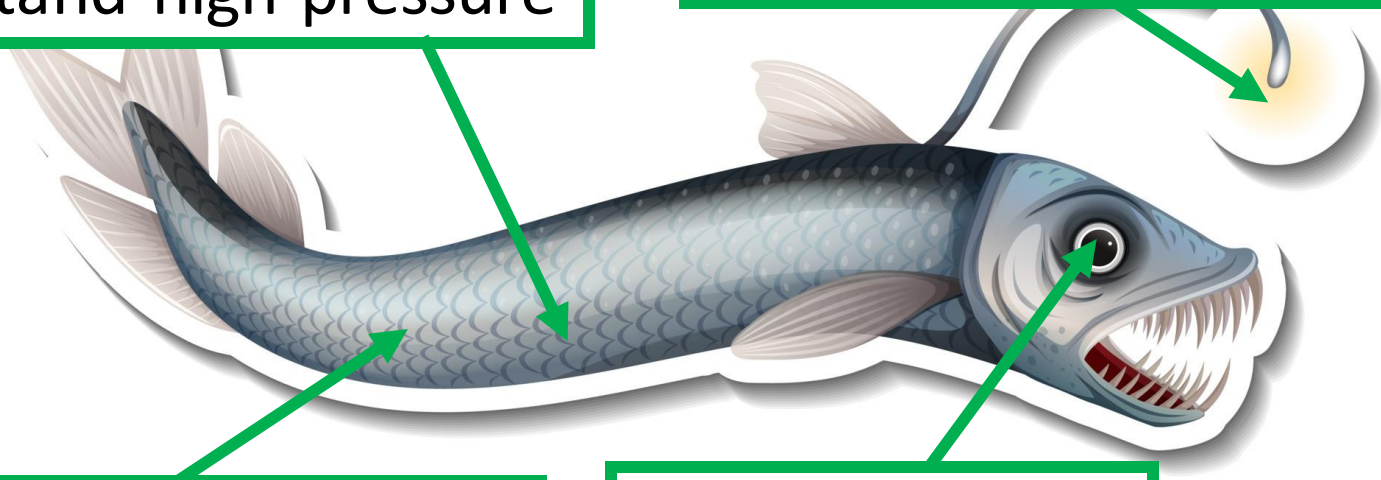
7.1.4 Adaptations

Think
Pair
Share

How may organisms be adapted to live in these conditions?



No air bladder to withstand high pressure

Bioluminescent lure to attract prey/mates or see predators.

Low metabolism to cope with lack of food.

Large eyes to detect any light.

CS/F CS/H SS/F SS/H

7.1.4 Adaptations

Think
Pair
Share

Why is it difficult for most organisms to live in very salty conditions?

Dead Sea

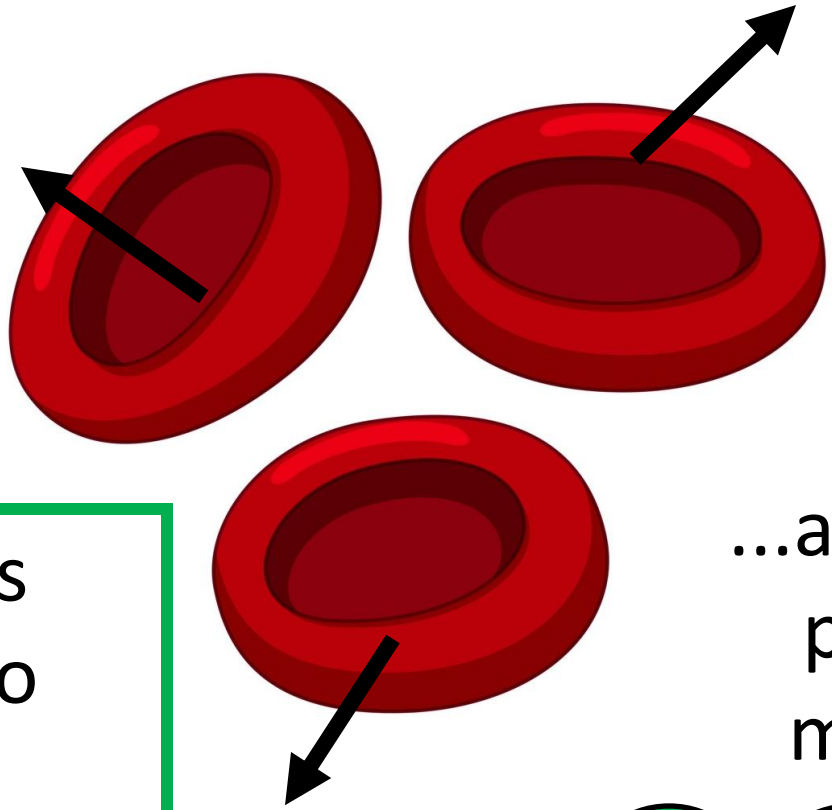
7.1.4 Adaptations

Think Pair Share

Why is it difficult for most organisms to live in very salty conditions?

Water leaves the cells...

..by osmosis.



Water moved from a dilute to concentrated solution...

...across a semi permeable membrane.

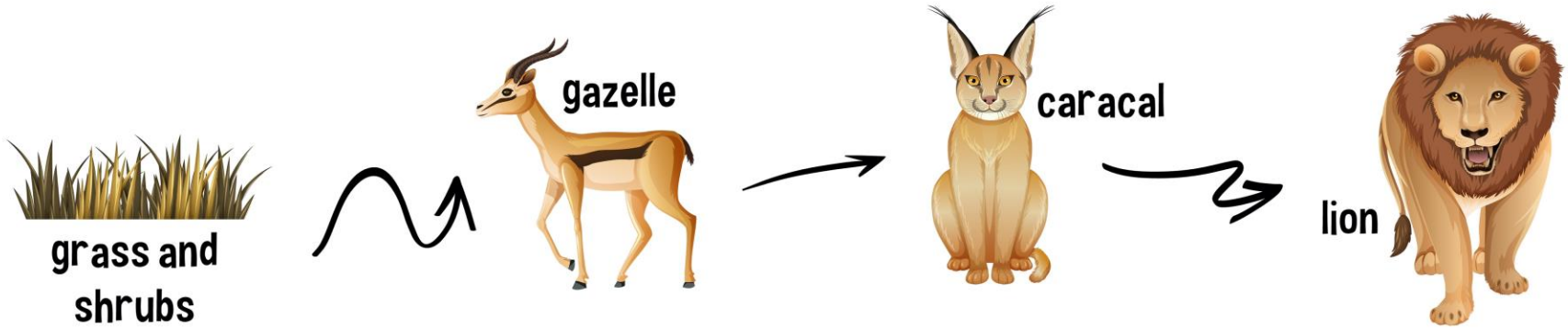
The cell is unlikely to survive.

CS/F CS/H SS/F SS/H

7.2.1 Levels of Organisation

Think
Pair
Share

What do all food chains start with? Why?



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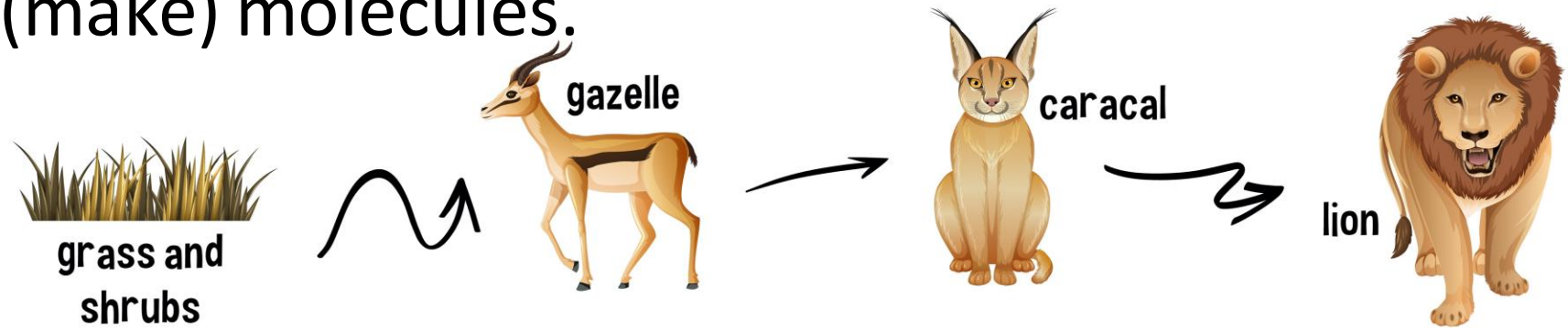
7.2.1 Levels of Organisation

All food chains start with **producers**. Plants and algae are examples of producers.

Producers are organisms which synthesise (make) molecules.



Plants and algae are producers that photosynthesise. → This makes glucose. → This glucose is biomass for life on Earth.

CS/F CS/H SS/F SS/H

7.2.1 Levels of Organisation

Producers are eaten by primary consumers.

Primary consumer

Can be consumed by other consumers

Secondary consumer

Tertiary Consumer

CS/F CS/H SS/F SS/H

7.2.1 Levels of Organisation

Key Term	Definition
Predator	
Prey	
Stable Community	

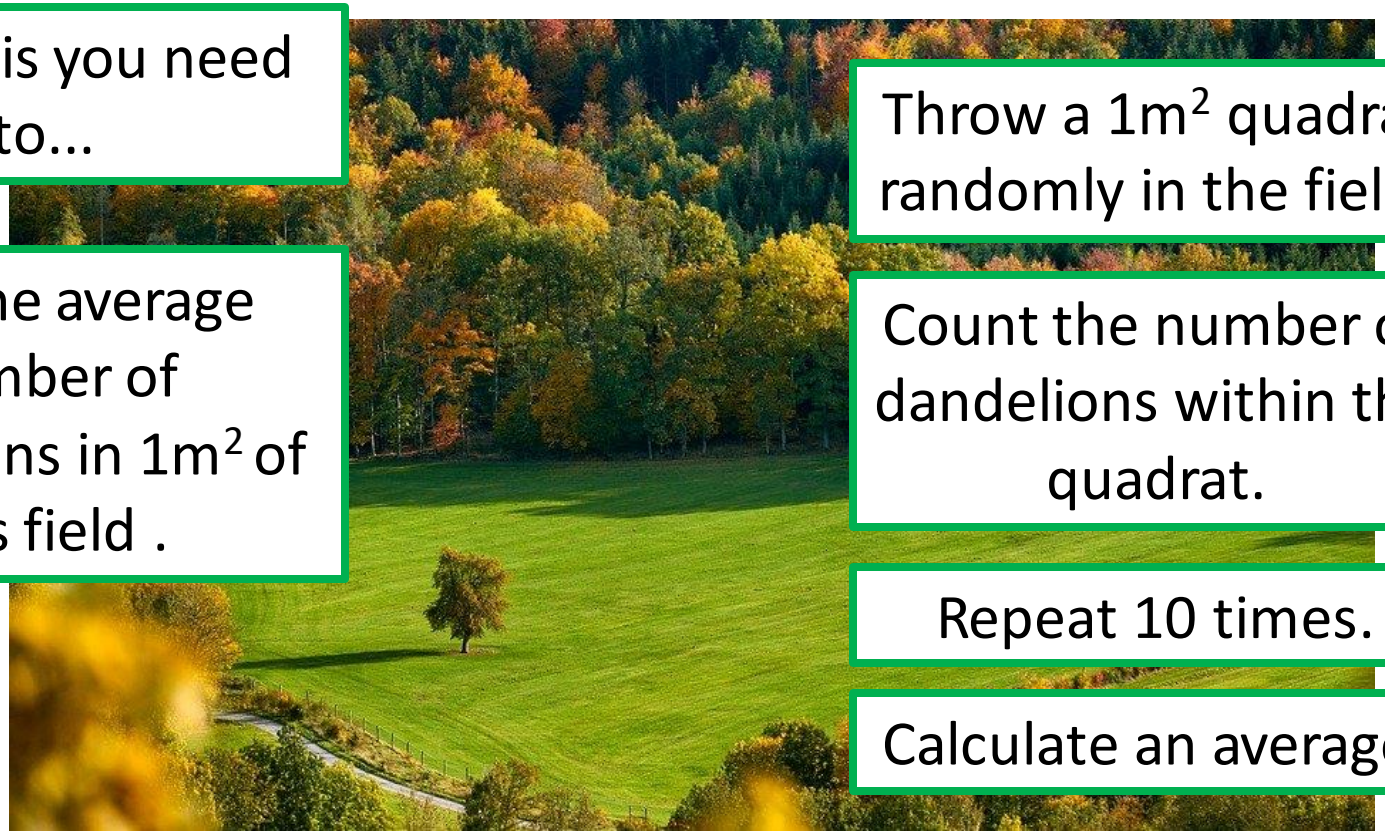
CS/F CS/H SS/F SS/H

7.2.1 Levels of Organisation

Think
Pair
Share

How could you estimate the abundance of dandelions in this field?

To do this you need to...



Throw a 1m^2 quadrat randomly in the field.

Count the number of dandelions within the quadrat.

Repeat 10 times.

Calculate an average.

Find the average number of dandelions in 1m^2 of this field .

7.2.1 Levels of Organisation

Think
Pair
Share

How could you estimate the abundance of dandelions in this field?

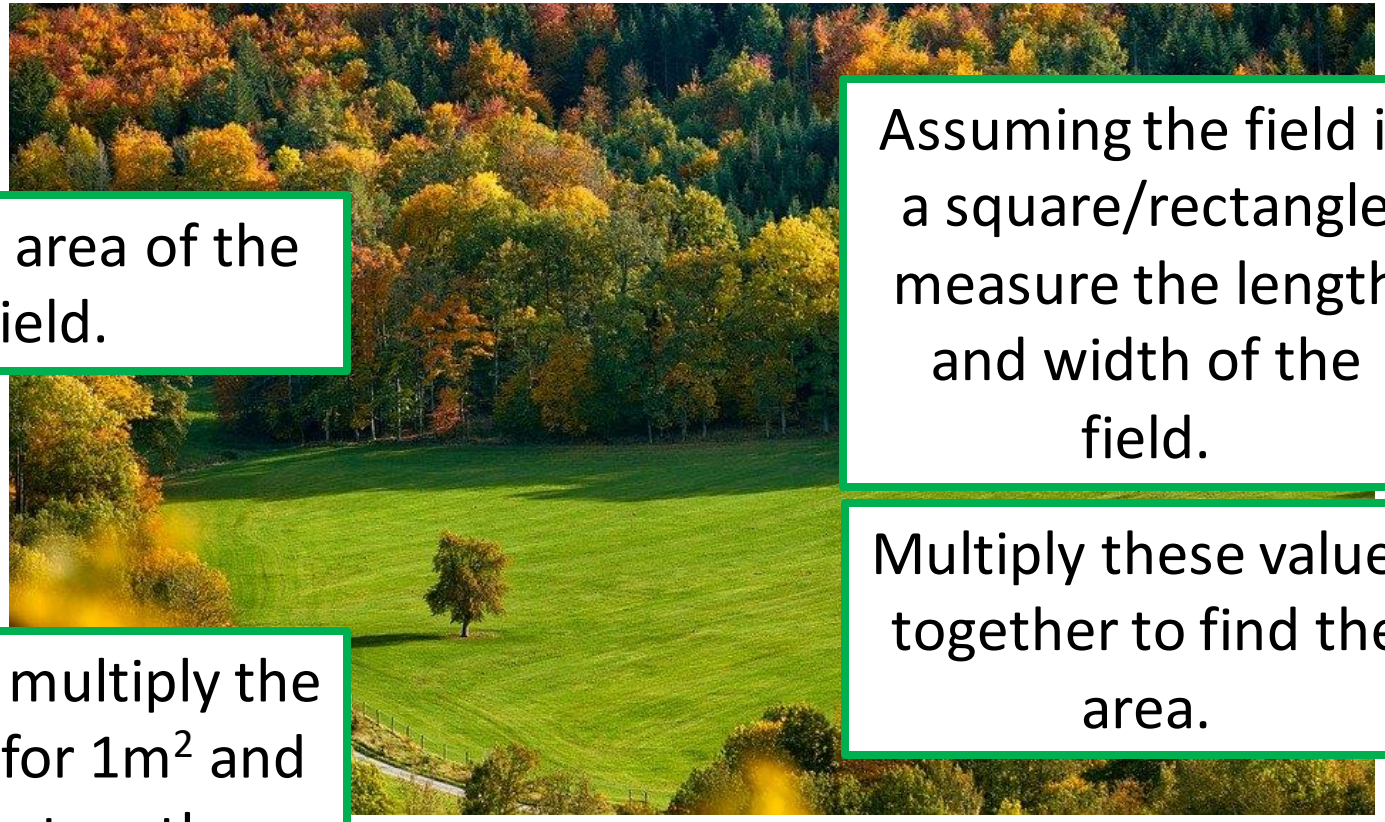
Then

Find the area of the field.

Assuming the field is a square/rectangle measure the length and width of the field.

Multiply these values together to find the area.

You then multiply the average for 1m^2 and the area together.



CS/F CS/H SS/F SS/H

7.2.1 Levels of Organisation

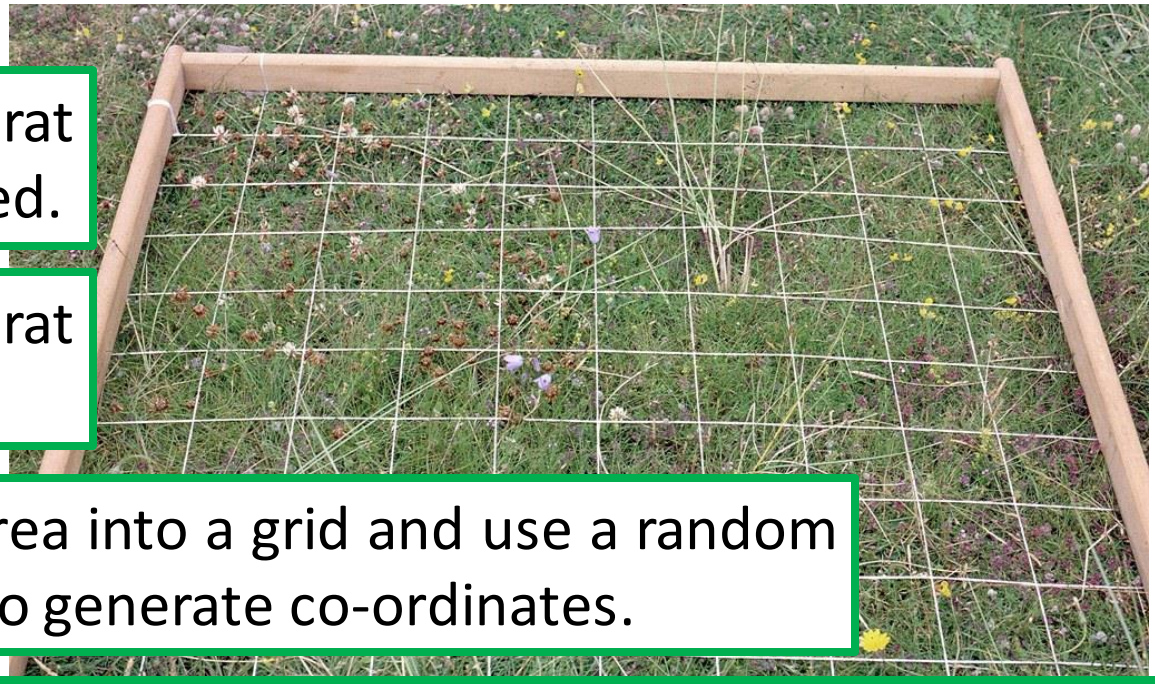
Think Pair Share

How could you place a quadrat randomly and why it is important to do so?

You could...

Throw the quadrat with your eyes closed.

Throw the quadrat over your shoulder.



Turn your sample area into a grid and use a random number generator to generate co-ordinates.

This avoids **bias** and ensures results collected are **valid**.

CS/F CS/H SS/F SS/H

7.2.1 Levels of Organisation

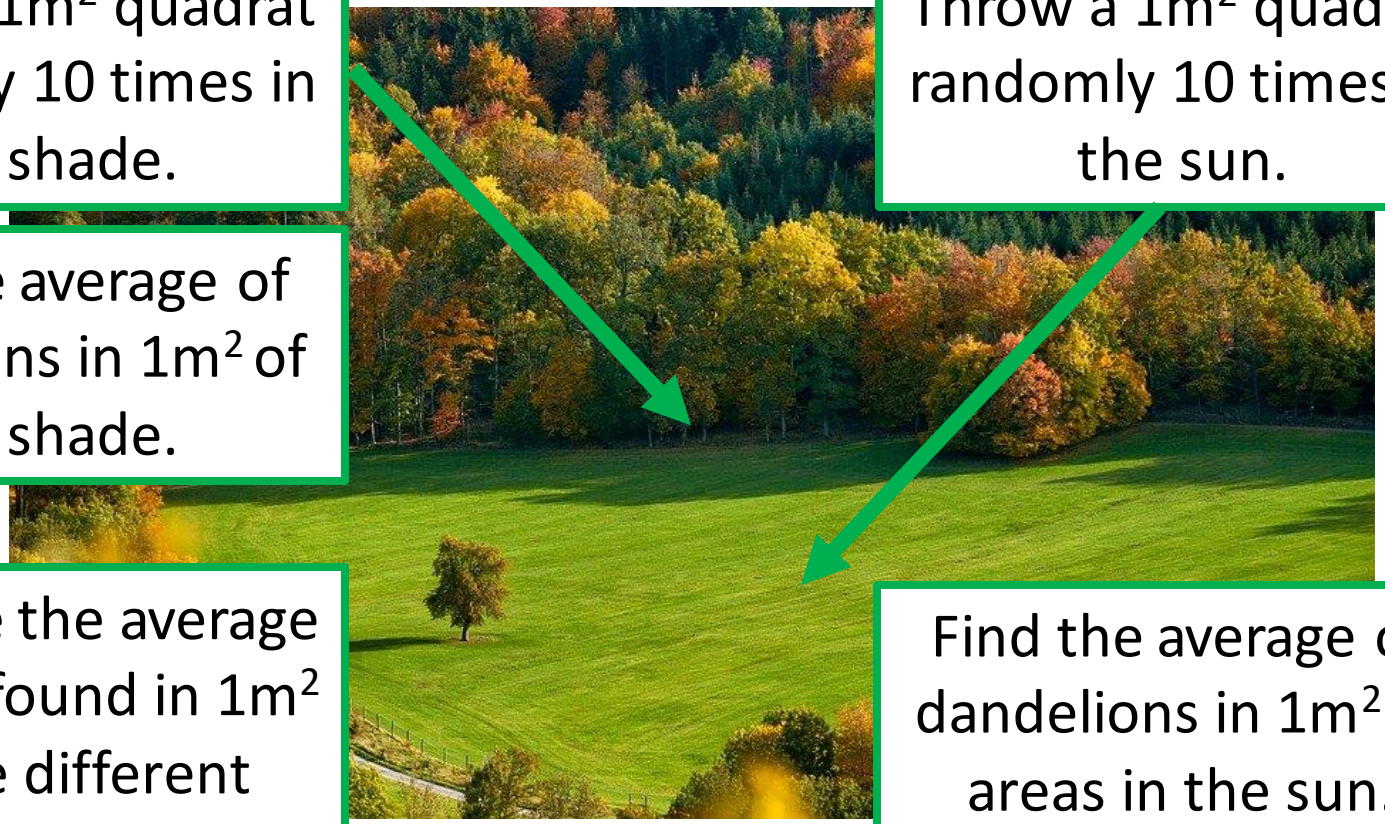
Think
Pair
Share

How could you use a quadrat to investigate how light affects the distribution of dandelions?

Throw a $1m^2$ quadrat randomly 10 times in the shade.

Find the average of dandelions in $1m^2$ of the shade.

Compare the average number found in $1m^2$ for the different conditions.



Throw a $1m^2$ quadrat randomly 10 times in the sun.

Find the average of dandelions in $1m^2$ of areas in the sun.

CS/F CS/H SS/F SS/H

7.2.1 Levels of Organisation

Think
Pair
Share

How could you use a transect line to investigate how light affects the distribution of dandelions?

Place a 100m transect line starting at the edge of the field.

Place a quadrat at the 0m position.

Record the light intensity and count the number of dandelions in the transect.

Repeat placing the quadrat at 10m intervals along the transect line.

Repeat by placing other transect lines.

CS/F CS/H SS/F SS/H

Exam Practice

Plan an investigation to estimate the size of a population of ragwort growing in a rectangular field on a farm.

_____

_____

_____

Level 2: The method would lead to the production of a valid outcome. All key steps are identified and logically sequenced.

3–4

Level 1: The method would not necessarily lead to a valid outcome. Most steps are identified, but the plan is not fully logically sequenced.

1–2

use of quadrat

(quadrat) of given area / dimensions – e.g. 0.25 m^2 or 1 m × 1 m

quadrats are placed randomly

method of obtaining randomness – e.g. random coordinates from a calculator or throw over shoulder or throw with eyes closed

suitable number of quadrats (10 or more or a large number)

count number of plants (in each quadrat)

calculation of mean per quadrat or per unit area

determination of area of field (length × width)

population = mean per m^2 × area of field

(4)

Exam Practice

Sample number	Number of Daphnia in 1 dm^3 water
1	5
2	21
3	0
4	16
5	28

(d) Calculate the mean number of Daphnia in 1 m^3 of pond water.

1 m^3 = 1000 dm^3

Average = 14

14 x 1000

Mean number of Daphnia in 1 m^3 of pond water = 14,000

(2)

Exam Practice

The pond was a rectangular shape, measuring:

- length = 2.5 metres
- width = 1.5 metres
- depth = 0.5 metres.

Calculate the estimated number of Daphnia in the pond.

Use your answer from part **(d)**. 14,000

Give your answer in standard form.

Volume of Pond = 2.5 x 1.5 x 0.5 = 1.875m^3

No. of Daphnia = 14,000 x 1.875

No. of Daphnia = 26,250

No. of Daphnia = 2.6250×10^{-4}

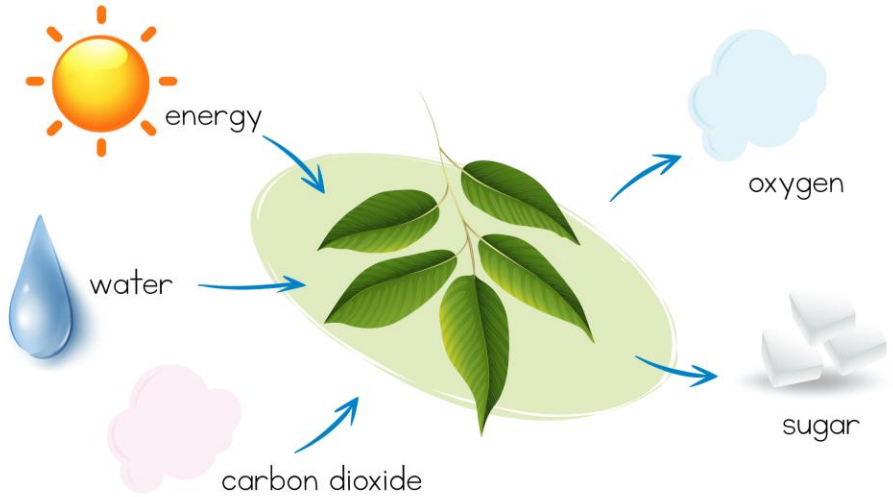
7.2.2 Cycling Materials

Think
Pair
Share

What is respiration?

What is photosynthesis?

Photosynthesis	The process by which plants make glucose by reacting water and carbon dioxide together.



$$6CO_2 + 6H_2O \longrightarrow C_6H_{12}O_6 + 6O_2$$

CS/F CS/H SS/F SS/H

7.2.2 Cycling Materials

Think
Pair
Share

What is respiration?
What is photosynthesis?

Respiration	A process that transfers energy from living organisms.

Glucose + Oxygen → Carbon Dioxide + Water

This reaction takes place in the mitochondria of all cells.

In the reaction energy is released.

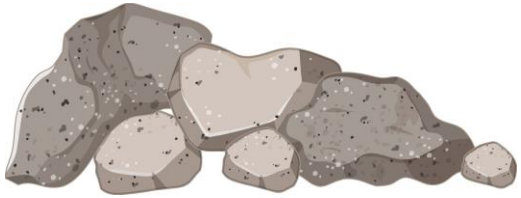
CS/F CS/H SS/F SS/H

7.2.2 Cycling Materials

Think
Pair
Share

Where on Earth can carbon be found?

Animals and Plants



Sedimentary Rocks

Calcium Carbonate

Fossil Fuels

Coal, oil, natural gas

Places Carbon can be Found

Atmosphere

Oceans

Soil

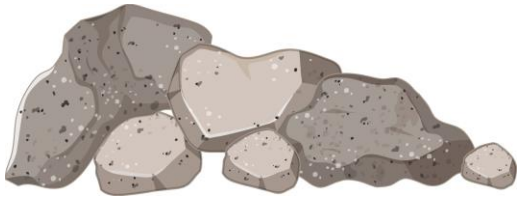
CS/F CS/H SS/F SS/H

7.2.2 Cycling Materials

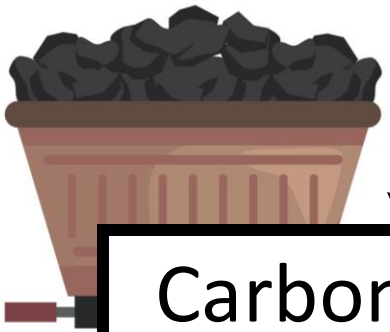
Think
Pair
Share

Where on Earth can carbon be found?

Animals and Plants



Sedimentary



F

Coal, c

onate

e

Carbon stores are a place where carbon and its compounds may remain for a time.

Oceans

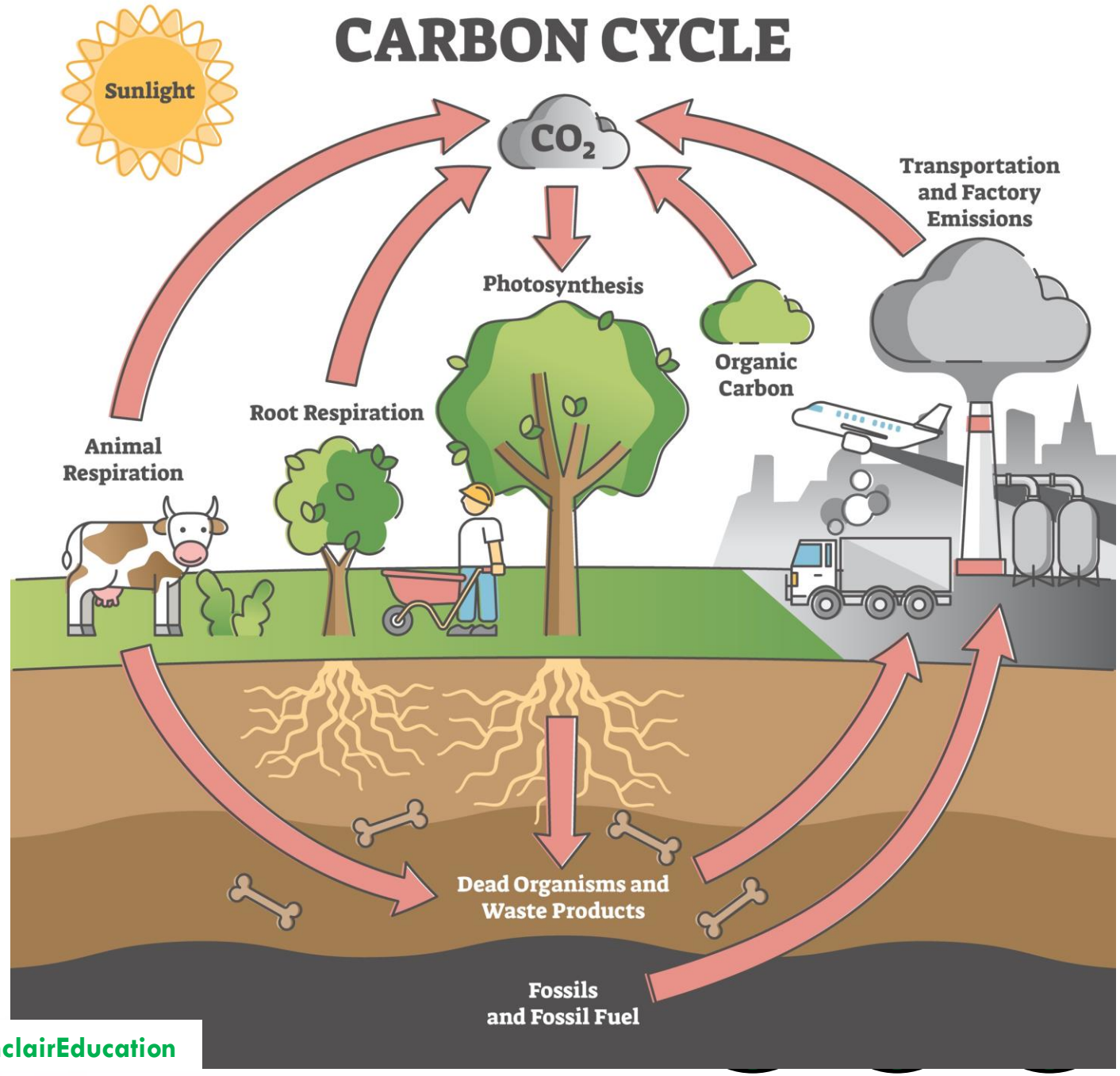
Soil

CS/F CS/H SS/F SS/H

AQA GCSE Biology Paper 2 Revision

Think
Pair
Share

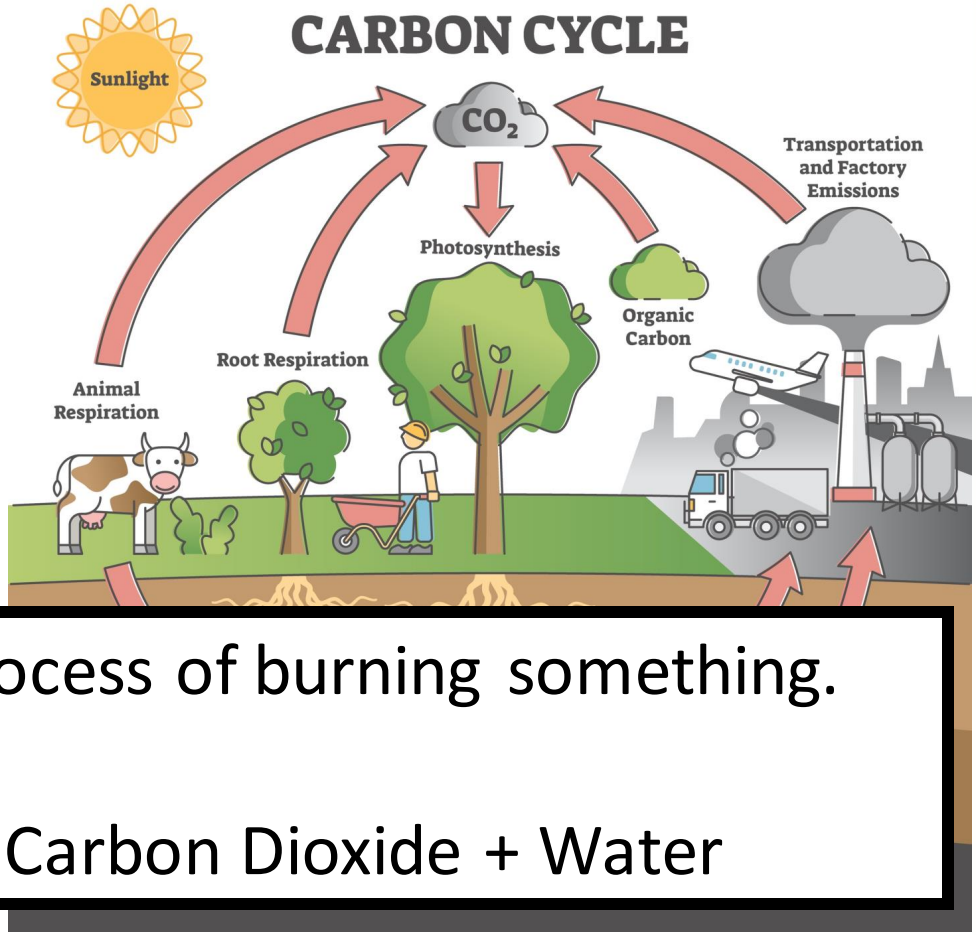
CARBON CYCLE



SS/H

Think
Pair
Share

- Photosynthesis
- Respiration
- Dissolving
- Combustion



Combustion is the process of burning something.

Fuel + Oxygen → Carbon Dioxide + Water

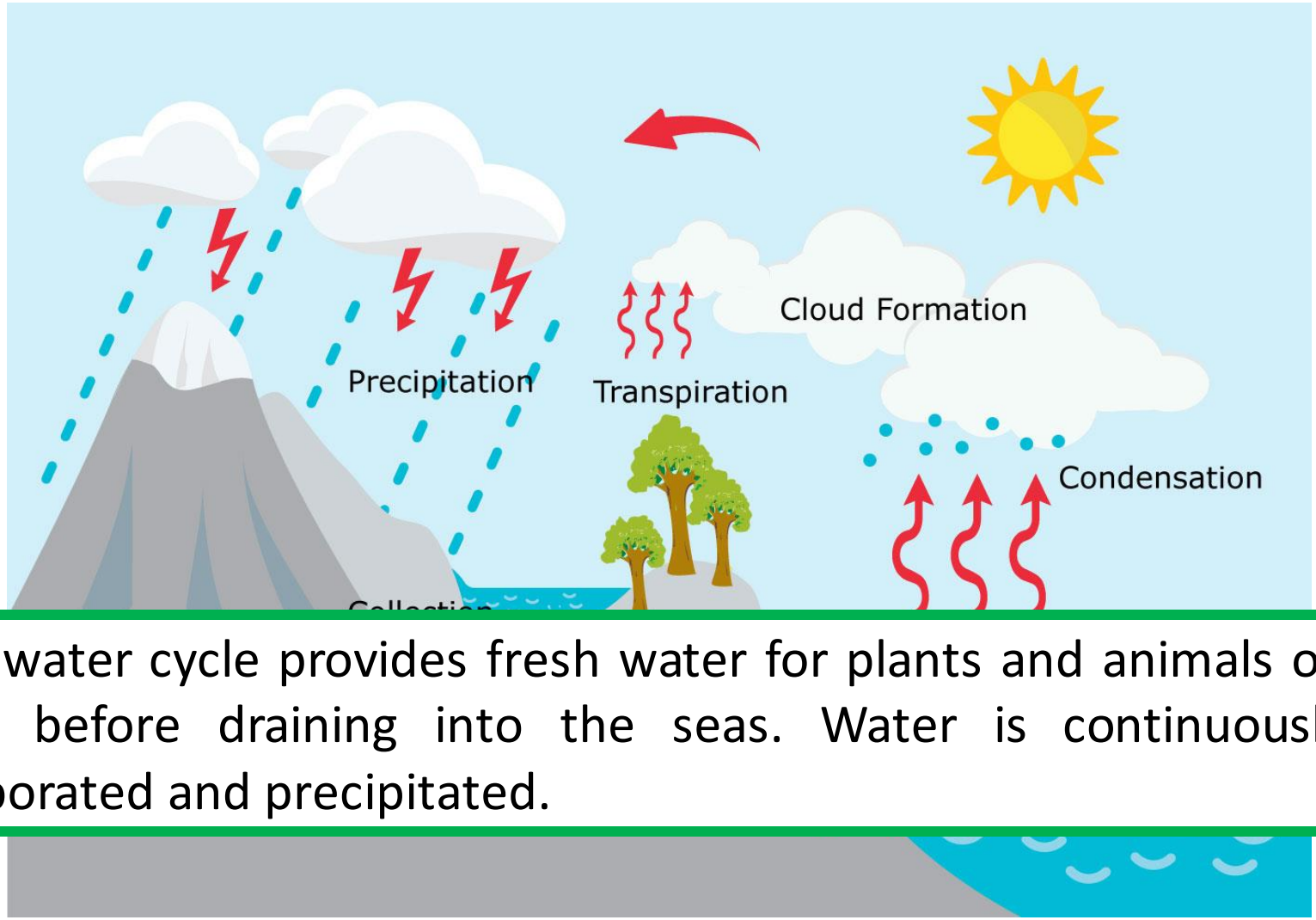
CS/F CS/H SS/F SS/H

7.2.2 Cycling Materials

Key Term	Definition
Combustion	
Respiration	
Decay	
Photosynthesis	

CS/F CS/H SS/F SS/H

7.2.2 Cycling Materials



The water cycle provides fresh water for plants and animals on land before draining into the seas. Water is continuously evaporated and precipitated.

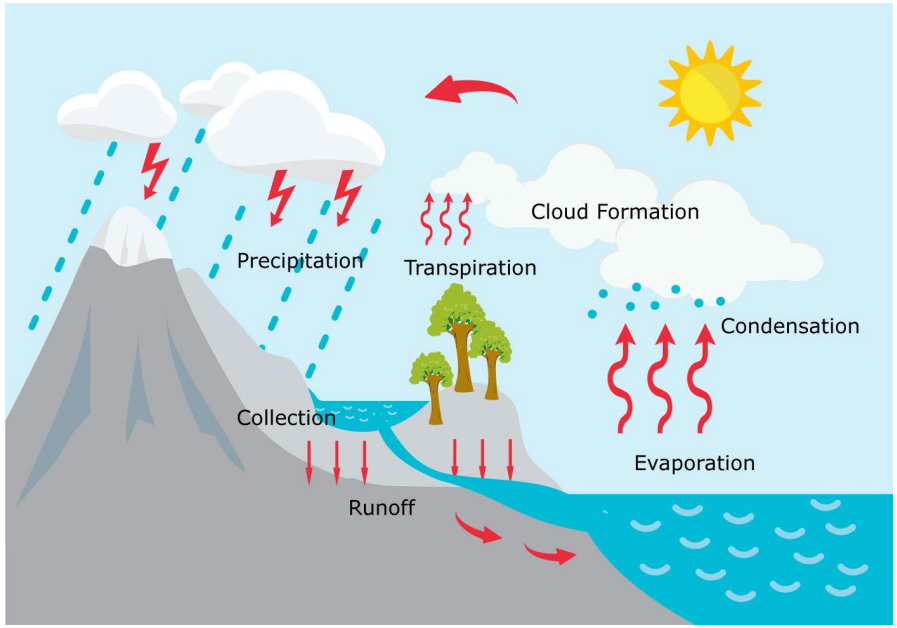
CS/F CS/H SS/F SS/H

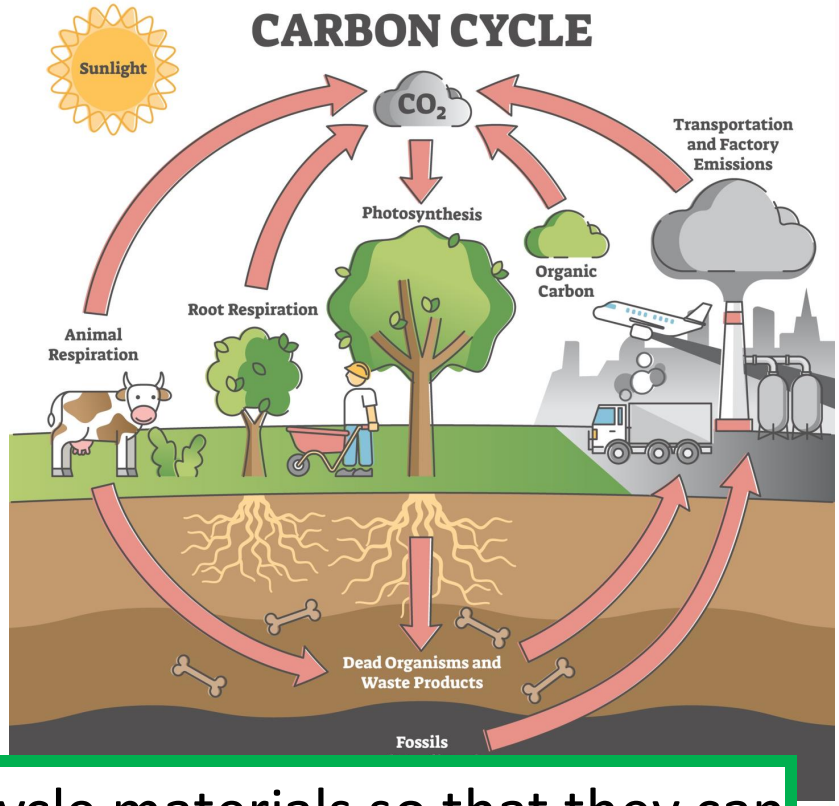
7.2.2 Cycling Materials

Key Term	Definition
Evaporation	
Condensation	
Precipitation	
Transpiration	

CS/F CS/H SS/F SS/H

7.2.2 Cycling Materials

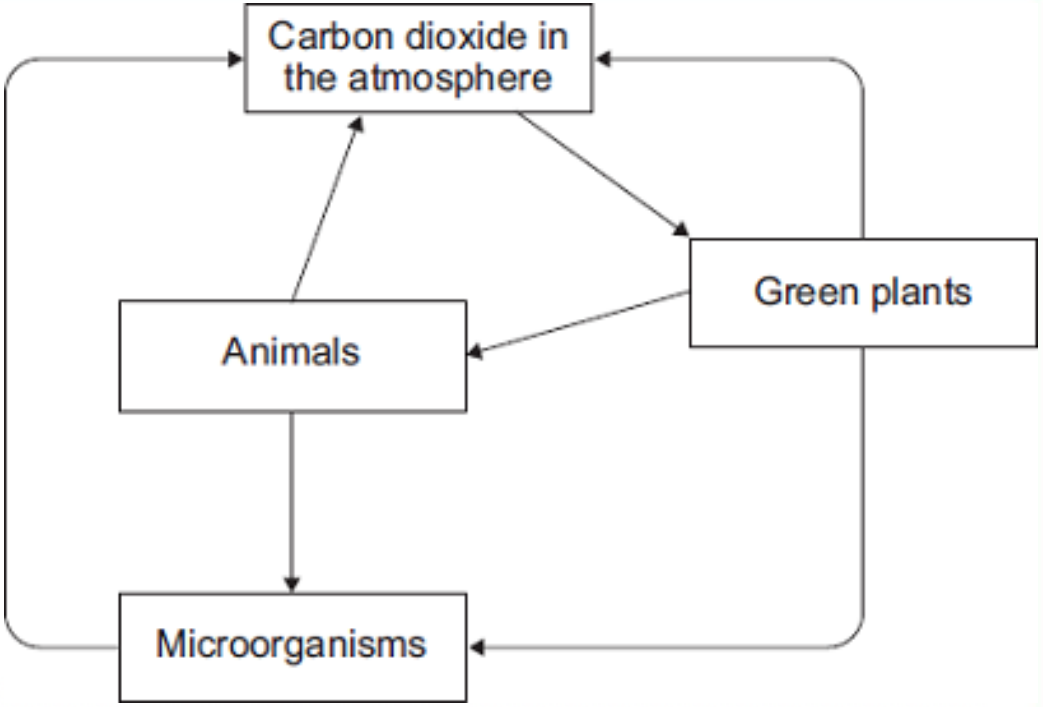




The carbon and water cycle both cycle materials so that they can be used as the building blocks for future organisms.

CS/F CS/H SS/F SS/H

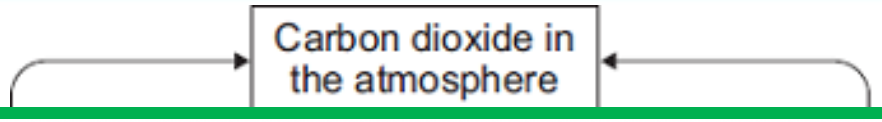
Exam Practice



Describe how living things are involved in the constant cycling of carbon.

(Total 6 marks)

Exam Practice



Level 1 (1-2 marks)
For at least one process **either** the organism that carries it out **or** the carbon compound used **or** the carbon compound produced is described **or** for at least one organism **either** the carbon compound it uses **or** the carbon compound it produces is described **or** at least one process is named

Level 2 (3-4 marks)
For some processes (at least one of which is named) **either** the organisms involved **or** the carbon compounds used **or** the carbon compounds produced are described

Level 3 (5-6 marks)
For at least one named process an organism **and** either the carbon compound used for the process **or** the carbon compound produced by the process are described **and** for other processes (at least one of which is named) **either** the organism **or** the carbon compounds used **or** the carbon compounds produced are described (as in Level 2)

Describe how living things are involved in the constant cycling of carbon.

_____

_____

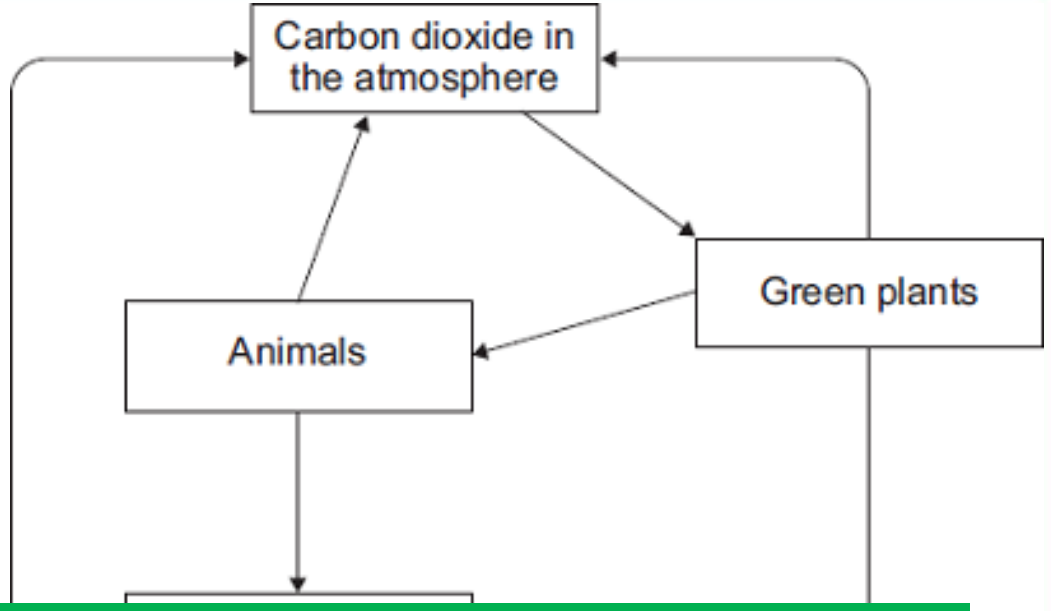
_____

_____

_____

_____ **(Total 6 marks)**

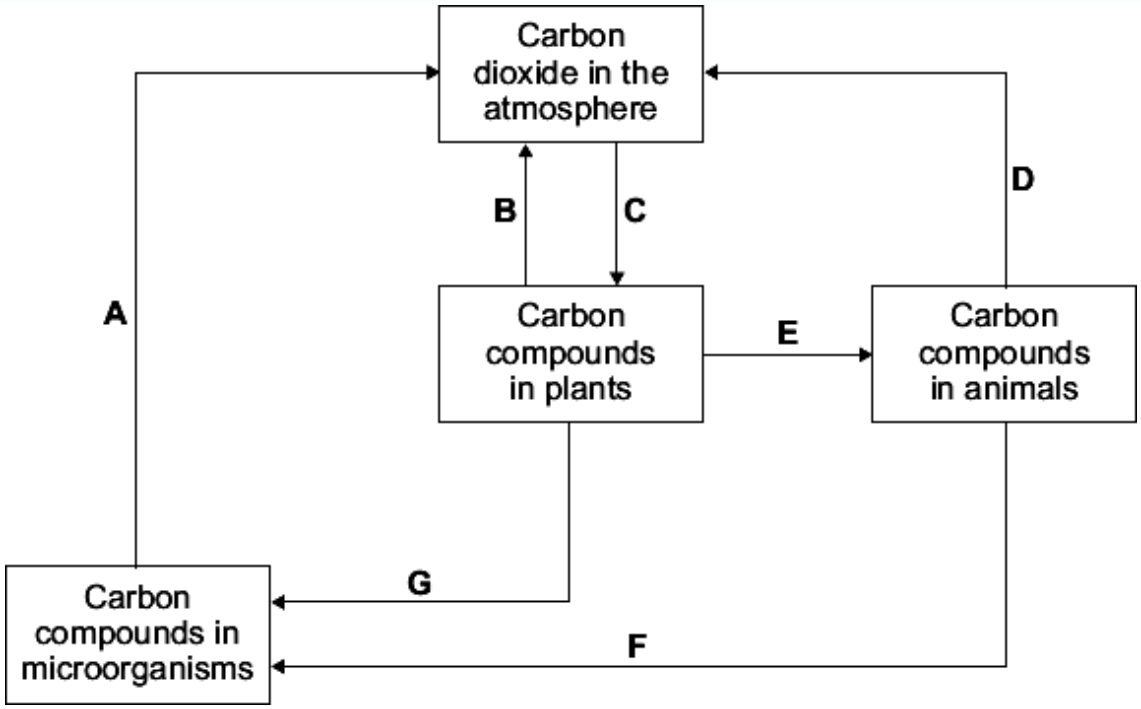
Exam Practice



- plants photosynthesise
- photosynthesis takes in carbon dioxide
- plants use carbon to make carbohydrate / protein / fat
- animals eat (green) plants (and other animals)
- plants respire
- animals respire
- respiration releases carbon dioxide
- (green) plants and animals die
- microorganisms decay / feed on dead organisms
- microorganisms respire

(Total 6 marks)

Exam Practice



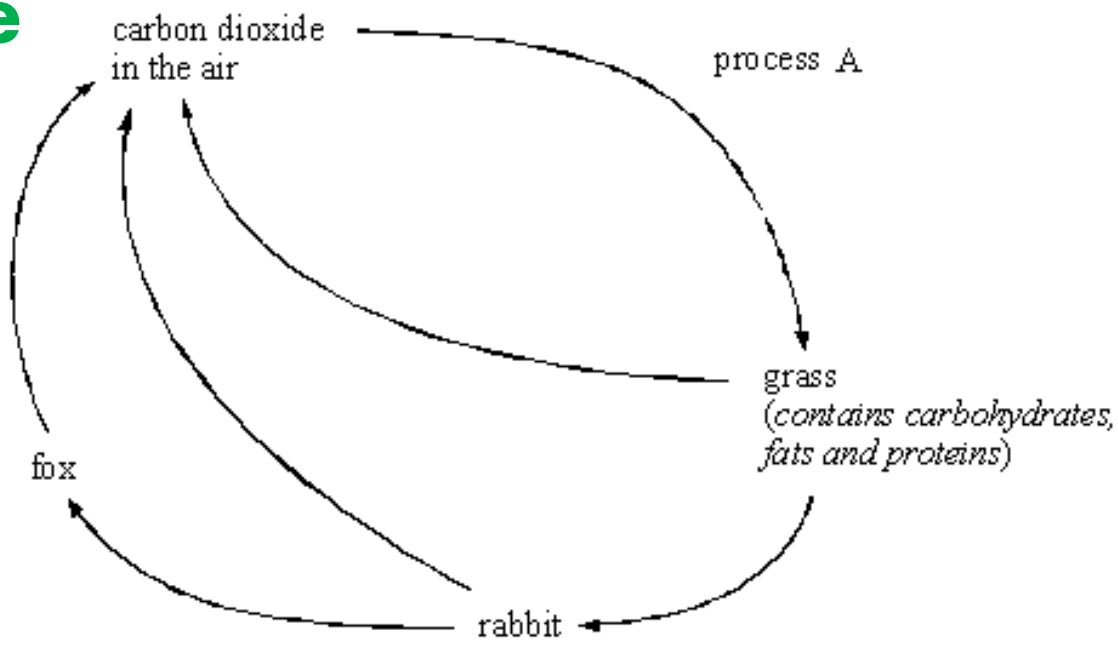
Letter **A** represents respiration.

Which **two** other letters represent respiration?

B and D

(1)

Exam Practice



Explain, as fully as you can, how some of the carbon in the grass becomes part of the fox's body.

Grass eaten by rabbit

Rabbit eaten by fox

The carbon passes along the food chain through carb/fat/proteins

(3)

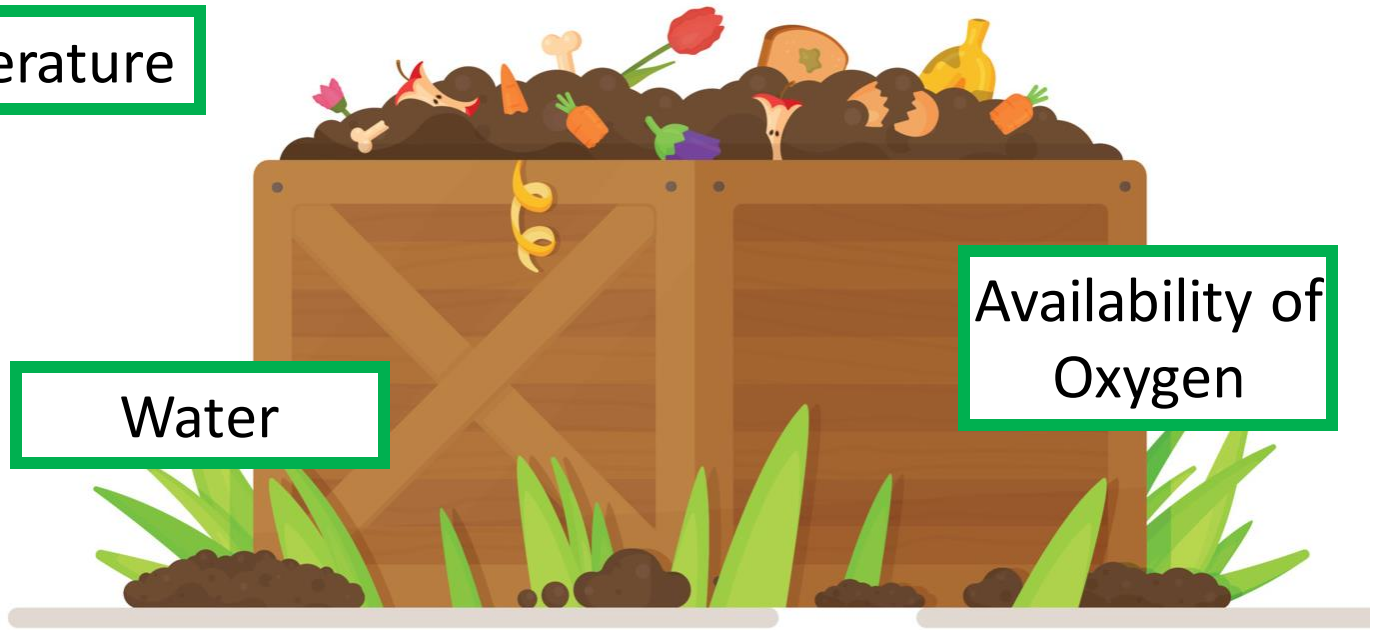
7.2.3 Decomposition

Think
Pair
Share

What are the ideal conditions for decay?

The rate of decay is affected by:

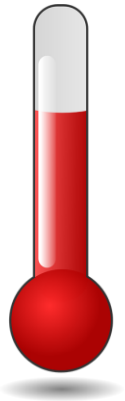
Temperature



Water

Availability of Oxygen

7.2.3 Decomposition

Factor	Effect on Rate of Decay
Temperature 	

7.2.3 Decomposition

Factor	Effect on Rate of Decay
Water 	

7.2.3 Decomposition

Factor	Effect on Rate of Decay
Availability of Oxygen	

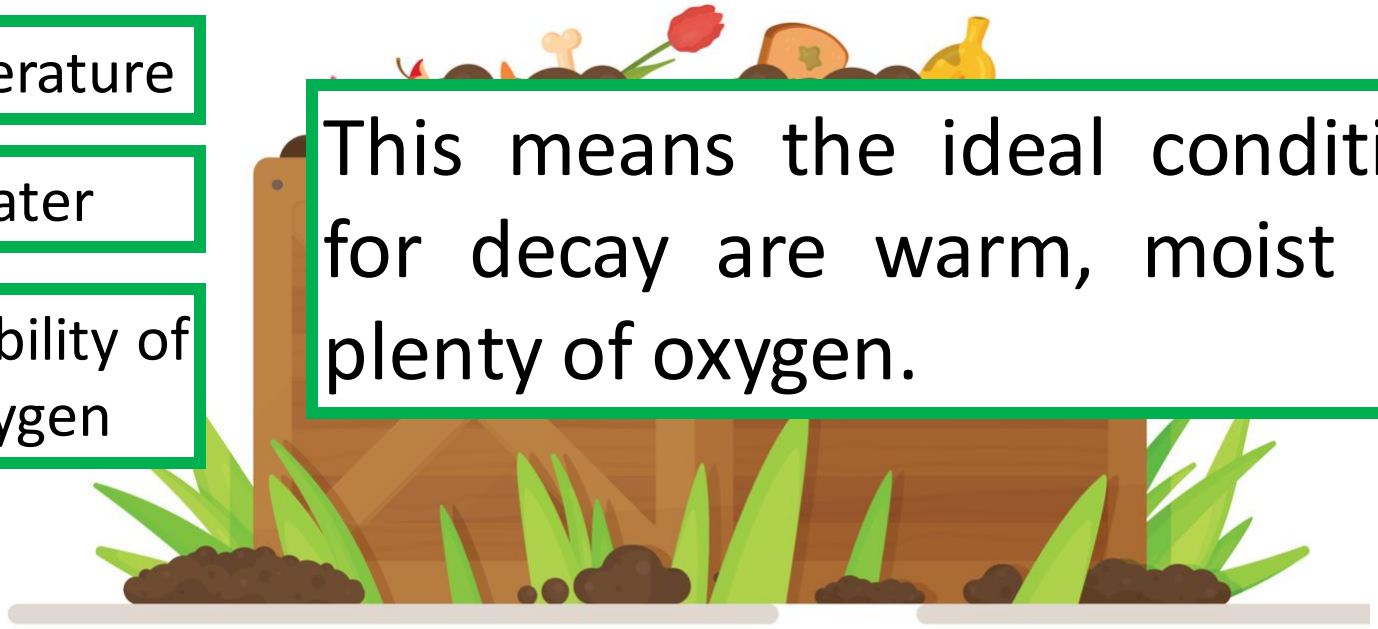
7.2.3 Decomposition

Think
Pair
Share

What are the ideal conditions for decay?

The rate of decay is affected by:

- Temperature
- Water
- Availability of Oxygen



This means the ideal conditions for decay are warm, moist and plenty of oxygen.

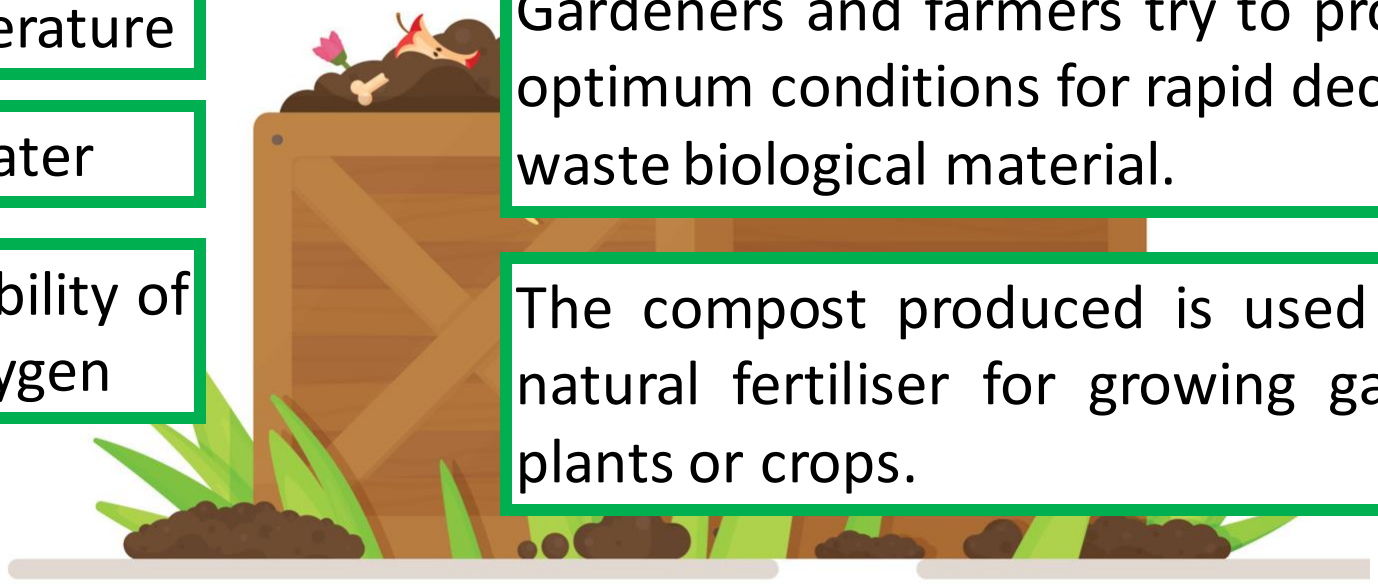
7.2.3 Decomposition

Think
Pair
Share

What are the ideal conditions for decay?

The rate of decay is affected by:

- Temperature
- Water
- Availability of Oxygen



Gardeners and farmers try to provide optimum conditions for rapid decay of waste biological material.

The compost produced is used as a natural fertiliser for growing garden plants or crops.

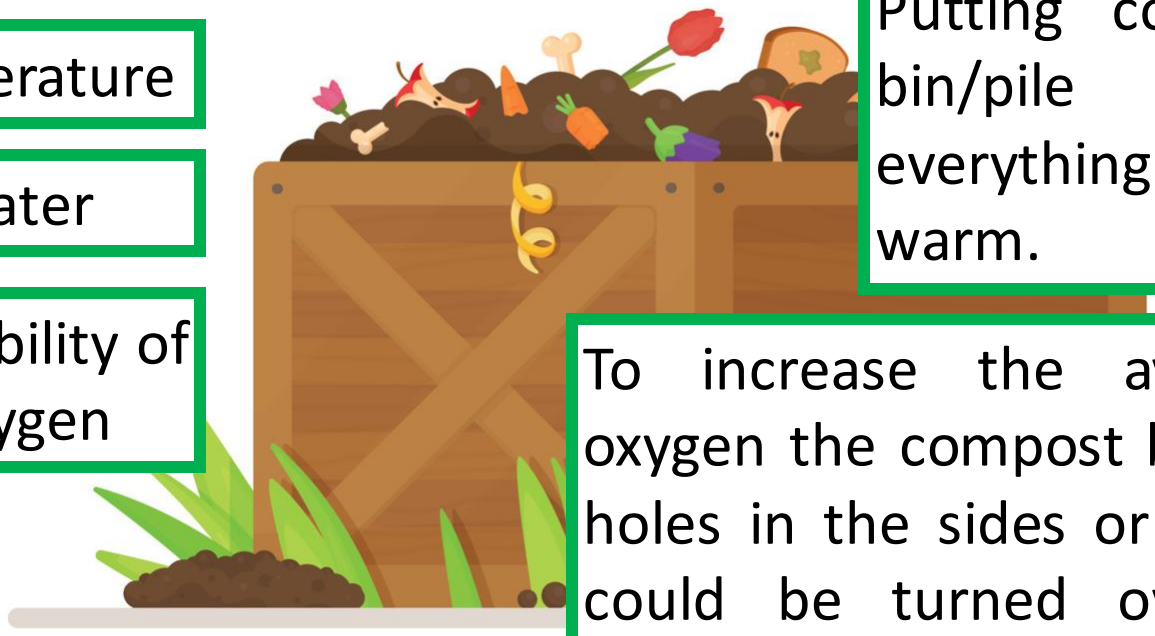
7.2.3 Decomposition

Think
Pair
Share

What are the ideal conditions for decay?

The rate of decay is affected by:

- Temperature
- Water
- Availability of Oxygen



Putting compost in a bin/pile helps keep everything moist and warm.

To increase the availability of oxygen the compost bins can have holes in the sides or the compost could be turned over regularly using a gardening fork/spade

CS/F CS/H SS/F SS/H

7.2.3 Decomposition

In a marsh soil can be really water logged. This means there is reduced availability of oxygen for decay.

Some bacteria and fungi are able to break down matter anaerobically (without oxygen)

The anaerobic decay produces methane and carbon dioxide. Both are greenhouse gases.

We can use the methane as a fuel.

CS/F CS/H SS/F SS/H

7.2.3 Decomposition

Biogas generators can be used to make methane as a fuel.

The biogas generators are large vessel that can be filled with animal waste or specifically grown crops such as maize.

This decays anaerobically producing methane which is collected.

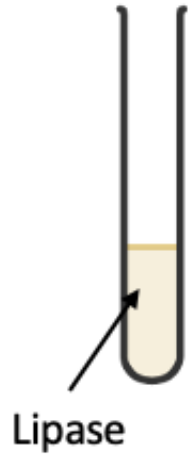
CS/F CS/H SS/F SS/H

7.2.3 Decomposition

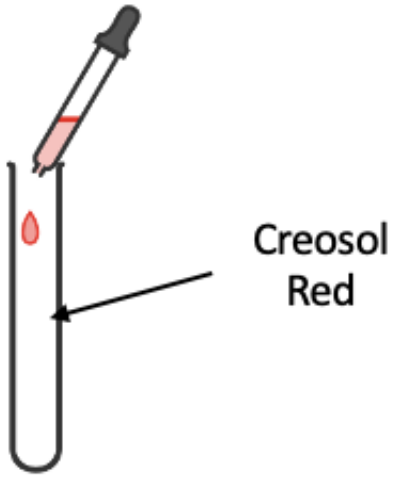
Think
Pair
Share

How can we investigate the effect of temperature on the rate of decay?

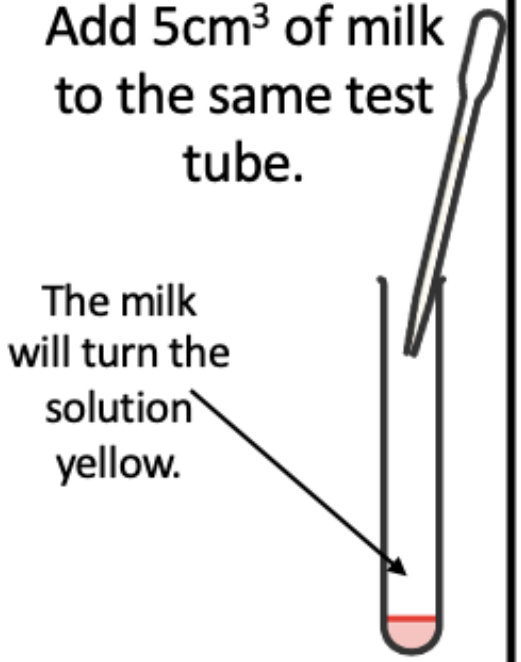
1.
Add 5cm^3 of lipase to a test tube.



2.
Add drops of creosol red to another test tube.



3.
Add 5cm^3 of milk to the same test tube.



CS/F CS/H SS/F SS/H

7.2.3 Decomposition

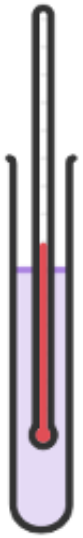
Think Pair Share

How can we investigate the effect of temperature on the rate of decay?

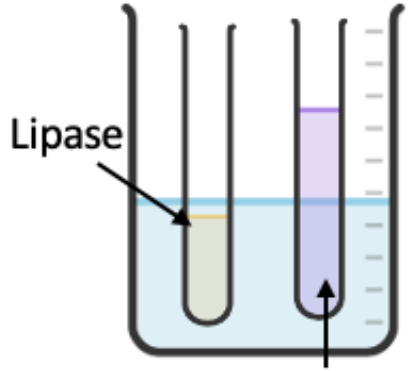
4.
Add 7cm^3 of sodium hydroxide to the same test tube.

The sodium hydroxide will turn the solution purple.

5.
Add a thermometer to the test tube.



6.
Add both test tubes to the water bath.



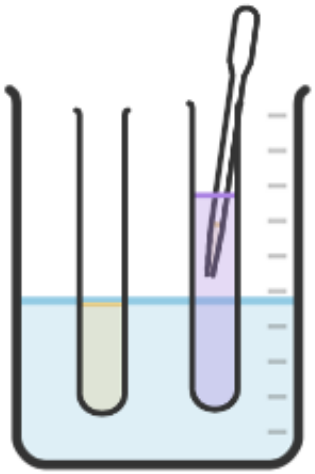
CS/F CS/H SS/F SS/H

7.2.3 Decomposition

Think
Pair
Share

How can we investigate the effect of temperature on the rate of decay?

7.
Remove 1 cm^3 of the lipase and add it to the milk



8.
Time how long it takes for the colour to change yellow.

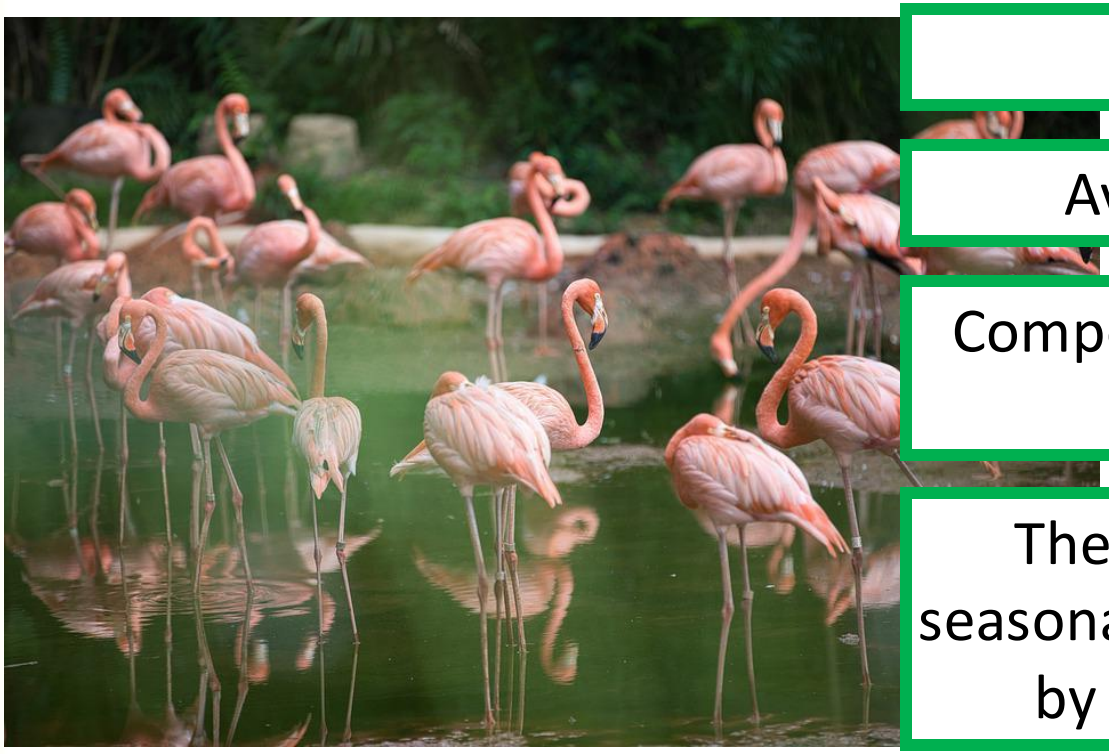
9.
Repeat at different temperatures.

CS/F CS/H SS/F SS/H

7.2.4 Impact of Environmental Change

Think
Pair
Share

What environmental changes can affect the distribution of a species in an ecosystem?



- Temperature
- Availability of water
- Composition of atmospheric gases.

These changes could be seasonal, geographic or caused by human interaction.

CS/F CS/H SS/F SS/H